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APPLICATION OF A FOURIER APPROXIMATION METHOD FOR THE SOLUTION OF STEADY WAVE PROBLEMS TO THE MICROCOMPUTER

Report submitted in fulfillment of the requirements for

CE 299 Individual Research

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APPLICATION OF A FOURIER APPROXIMATION METHOD FOR THE SOLUTION OF STEADY WAVE PROBLEMS TO THE MICROCOMPUTER

ABSTRACT

Fenton's FORTRAN program for the numerical solution of steady water wave problems is adapted to the microcomputer. Modified source code is provided in an appendix. The program is expanded to present accelerations, forces and moments, and to plot surface elevations, velocities and accelerations. Sample output is provided for deep and shallow water waves. Program performance in terms of convergence, accuracy and solution time is evaluated. The effect of current on solution is examined.

APPLICATION OF A FOURIER APPROXIMATION METHOD FOR THE SOLUTION OF STEADY WAVE PROBLEMS TO THE MICROCOMPUTER

I. INTRODUCTION.

The limitations of linear theory in the solution of steady water waves are well known. By ignoring the non-linearity of the dynamic and kinematic free surface boundary conditions, errors are introduced into the solution, errors which make the method impractical for steep waves, or for waves in shallow water. Engineers are often interested in such waves, and a variety of methods of analysis are available. The purpose of this project is to adapt one such method, the Fourier approximation method of Rienecker and Fenton (1981) to the microcomputer. Such a program, when combined with the increasing availability of microcomputers, provides engineers and researchers easy access to the solution of steady non-linear wave problems.

Currently, the most widely accepted methods of solving the non-linear wave problem are small parameter pertubation solutions. Stokes method employs wave steepness ($k\eta$) as the small parameter; where η is wave amplitude, k is wave number $2\pi/L$, and L is wave length. Accuracy for steep waves is improved over linear theory, but the method cannot be applied in shallow water. Shallowness d/L, where d is water depth, is the small parameter used in cnoidal theory. As expected, accuracy is good in shallow water, but not for steep waves or in deep water. Neither of the methods are universally applicable, leading investigators to search for a more satisfactory approach.

Chappelear (1961) developed a numerical Fourier approximation

method. A solution in the form of a Fourier series is assumed, and a set of simultaneous non-linear equations forming the boundary value problem is established. The Fourier coefficients are then determined numerically. This method is universally applicable for steep waves, in both shallow and deep water, but was not presented in a easily applied form. Dean (1965) used the stream function instead of the velocity potential function, and established a formulation which was more computationally straightforward. He prepared tables (Dean, 1974) of various output variables for engineering application, which led to greater exposure and acceptability for the method.

Rienecker and Fenton (1981) present an adaptation of this method, making several improvements over previous approaches. The simultaneous equations are solved exactly using the Newton-Rhapson method, providing rapid convergence for most wave conditions typically encountered. The only approximation to the solution is the truncation of the Fourier series to a finite number of terms. A co-flowing current is also considered. As will be subsequently shown, errors introduced by ignoring current can be as important as the corrections to linear theory that higher order theories predict. Clearly, neglecting current can be inconsistent with the use of higher order theories. Finally, the method is readily adapted to the computer, and Fenton (1983) presents program source code. The complicated graphic, logarithmic double-interpolation needed to apply Dean's tables is a significant roadblock to its widespread application. With Fenton's program modified for the microcomputer, the solution can be computed exactly for the wave height, period, and water depth

desired. Tables of solutions become unnecessary, even for those without easy access to mainframes. Increased access to this method should earn it the acceptance and popularity it deserves.

II. PHYSICS.

The basic theory and equations are presented by Rienecker and Fenton (1981), and Fenton (1983). The discussion here is limited to additions to Fenton's program, and familiarity with the above papers is assumed.

Fenton's subroutine "POINT" computes surface elevation for any position along the wave, and pressure and water particle velocity for any position and depth. The subroutine can be modified, or a different routine developed to suit the needs of the user. This adaptation computes accelerations (total time derivatives of velocities) and horizontal forces and moments on a vertical circular cylinder, using the Morison equation. Inertia and drag components are presented, both per unit depth and depth-integrated.

Rienecker and Fenton (1981) non-dimensionalize their solution by mean water depth. Fenton (1983) uses wave number, which makes the coding more efficient.

A. Water Particle Accelerations. Fenton (1983) presents the following dimensionless equations for horizontal and vertical fluid velocities (U,V) in a fixed reference plane:

$$U(k/g)^{1/2}=c(k/g)^{1/2}-\bar{u}(k/g)^{1/2}+\sum_{j=1}^{N} jB_j \frac{\cosh jk(d+Y)}{\cosh jkd} \cos jk(X-ct) \quad (1a)$$

$$V(k/g)^{1/2}=\sum_{j=1}^{N} jB_j \frac{\sinh jk(d+Y)}{\cosh jkd} \sin jk(X-ct) \quad (1b)$$

where:

k = wavenumber = $2\pi/L$

L = wavelength

c = celerity = L/T

$\bar{u}$ = mean fluid velocity relative to wave speed

t = time (= 0 at crest)

T = wave period

g = acceleration due to gravity

B_j = jth Fourier coefficient

N = number of Fourier coefficients

X = horizontal distance from a fixed reference

Y = vertical distance from the free surface

d = water depth

Figure 1 illustrates the varibles used.

Using dimensionless variables, and a frame of reference moving with the wave, velocities become:

$$U^* = c^* - \bar{u}^* + \sum_{j=1}^{N} jB_j \frac{\cosh j(d^*+y^*)}{\cosh jd^*} \cos jx^* \tag{2a}$$

$$V^* = \sum_{j=1}^{N} jB_j \frac{\sinh j(d^*+y^*)}{\cosh jd^*} \sin jx^* \tag{2b}$$

where:

$U^* = U(k/g)^{1/2}$ $\qquad$ $x^* = k(X-ct)$

$\bar{u}^* = \bar{u}(k/g)^{1/2}$ $\qquad$ $y^* = kY$

$c^* = c(k/g)^{1/2}$ $\qquad$ $d^* = kd$

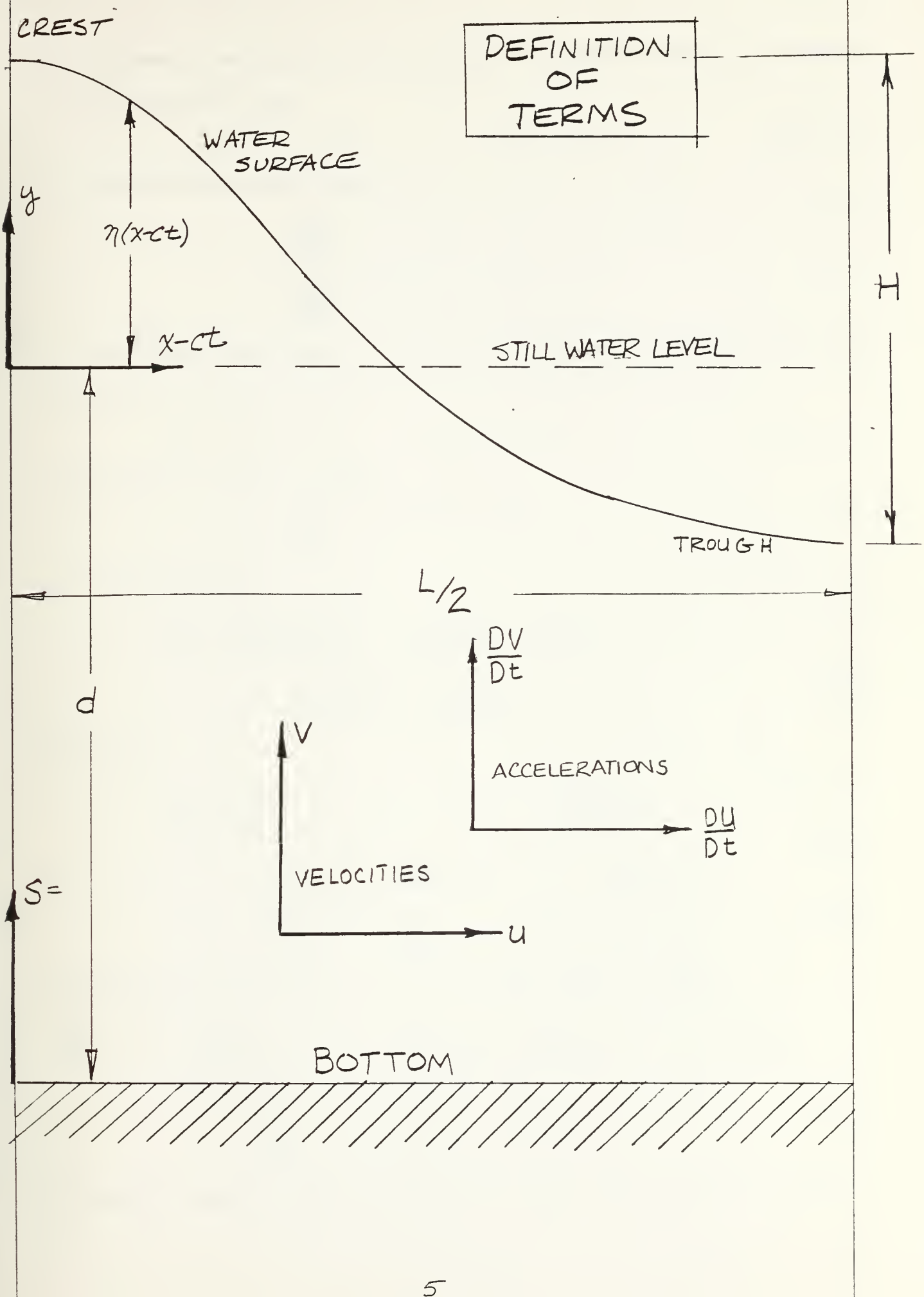
$V^* = V(k/g)^{1/2}$ $\qquad$ $t^* = t(gk)^{1/2}$

The following derivation is essentially from Sobey (1984). Accelerations, the total time derivatives of velocity, are:

$$\frac{DU}{Dt} = U_t + U \cdot U_x + V \cdot U_y \tag{3a}$$

$$\frac{DV}{Dt} = V_t + U \cdot V_x + V \cdot V_y \tag{3b}$$

where the subscripts indicate partial derivatives with respect to t, x and y.


DEFINITION OF TERMS
CREST
WATER SURFACE
y
η(x-ct)
x-ct
STILL WATER LEVEL
H
TROUGH
L/2
d
DV/Dt
ACCELERATIONS
DU/Dt
V
VELOCITIES
u
S=
BOTTOM

In a frame of reference moving with c, such that flow is steady, it can be shown that:

$$U_t = -c \cdot U_x \qquad V_t = -c \cdot V_x \tag{4a \& b}$$

The accelerations are therefore

$$\frac{DU}{Dt} = (U-c)U_x + V \cdot Uy \tag{5a}$$

$$\frac{DV}{Dt} = (U-c)V_x + V \cdot Vy \tag{5b}$$

To minimize computation, substitute equations of continuity and irrotational flow:

$$U_x + Vy = 0 \qquad Uy - V_x = 0 \tag{6a \& b}$$

into equation (5b) to yield

$$\frac{DV}{Dt} = (U-c)Uy - V \cdot U_x \tag{7}$$

Non-dimensionally,

$$\frac{DV}{Dt} = \frac{DV(k/g)^{1/2}}{Dt(gk)^{1/2}} \cdot \frac{(gk)^{1/2}}{(k/g)^{1/2}} = \frac{DV^*}{Dt^*} \cdot g \tag{8a}$$

$$V = \frac{V(k/g)^{1/2}}{(k/g)^{1/2}} = \frac{V^*}{(k/g)^{1/2}} \tag{8b}$$

Similarly,

$$\frac{DU}{Dt} = \frac{DU^*}{Dt^*} \cdot g \quad \text{and} \quad U-c = \frac{(U^*-c^*)}{(k/g)^{1/2}} \tag{9a \& b}$$

$$U_x = \frac{U(k/g)^{1/2}}{x \cdot k} \cdot \frac{k}{(k/g)^{1/2}} = U_x^* \cdot \frac{k}{(k/g)^{1/2}} \tag{10a}$$

$$U_x = \frac{U(k/g)^{1/2}}{y \cdot k} \cdot \frac{k}{(k/g)^{1/2}} = Uy^* \cdot \frac{k}{(k/g)^{1/2}} \tag{10b}$$

Substituting equations (9) and (10) into (5a) yields:

$$\frac{DU^*}{Dt^*} \cdot g = \frac{(U^*-c^*)}{(k/g)^{1/2}} \cdot U_x^* \cdot \frac{k}{(k/g)^{1/2}} + \frac{V^*}{(k/g)^{1/2}} \cdot Uy^* \cdot \frac{k}{(k/g)^{1/2}}$$

$$= (U^*-c^*)U_x^* \cdot g + V^* \cdot Uy^* \cdot g$$

$$\frac{DU^*}{Dt^*} = (U^*-c^*)U_x^* + V^* \cdot Uy^* \tag{11a}$$

Similarly, substituting equations (8) and (10) into (7) yields:

$$\frac{DV^*}{Dt^*} = (U^*-c^*)Uy^* - V^* \cdot U_x^* \qquad (11b)$$

Differentiating equation (2a) with respect to x and y yields:

$$U_x^* = -\sum_{j=1}^{N} j^2 B_j \frac{\cosh j(d^*+y^*)}{\cosh jd^*} \sin j(X^*-c^*t^*) \qquad (12a)$$

$$Uy^* = \sum_{j=1}^{N} j^2 B_j \frac{\sinh j(d^*+y^*)}{\cosh jd^*} \cos j(X^*-c^*t^*) \qquad (12b)$$

Equations (11) and (12) are used in the program to compute total water particle accelerations.

B. <u>Horizontal Forces and Moments on Vertical Right Circular Cylinders</u>. Wave forces on piles are among the local wave solution values most frequently required by engineers. Despite considerable research, little improvement has been made over the Morison equation (Morison, O'Brien, Johnson, Schaaf, 1950). Two horizontal components of force are postulated, drag force F_D and inertia force F_{Ih}. The values per unit depth for a particular depth are:

$$f_{Dh} = \frac{C_D \rho D}{2} U|U| \qquad f_{Ih} = \frac{C_M \rho \pi D^2}{4} \frac{DU}{Dt} \qquad (13a \ \& \ b)$$

where:

C_D = coefficient of drag

C_M = coefficient of inertia

ρ = mass density of water

D = pile diameter

Depth-integrated values are:

$$F_{Dh} = \int_0^S \frac{C_D \rho D}{2} U|U| dS \qquad F_{Ih} = \int_0^S \frac{C_M \rho \pi D^2}{4} \frac{DU}{Dt} dS \qquad (14a \ \& \ b)$$

where S = height above the bottom = y+d

Moments per unit depth at a particular depth S are:

$$m_{Dh} = \frac{C_D \rho D}{2} U|U| S \qquad m_{Ih} = \frac{C_M \rho \pi D^2}{4} \frac{DU}{Dt} S \qquad (15a \ \& \ b)$$

Depth-integrated values are:

$$M_{Dh} = \frac{C_D \rho D}{2} U|U| S \, dS \qquad M_{Ih} = \int_0^S \frac{C_M \rho \pi D^2}{4} \frac{DU}{Dt} S \, dS \qquad (16a \ \& \ b)$$

The limitations to these equations should be recognized; see Wiegel (1964,1982,1984), Bidde (1979,1971) and Brunn (1981), as well as the original paper. The total time derivative of velocity DU/Dt is used in this program; some investigators use local acceleration. In addition, vortex shedding and impact forces are not included. Constant values for pile diameter and coefficients of drag and mass over depth are assumed, permitting these values to be included in the dimensionalizing factors, and not in the program code (see Appendix 4). Pile diameters often change due to marine growth. Coefficients of drag and mass vary due to resulting changes in roughness, and as a function of Reynolds number and Keulegan-Carpenter number. These variations must be estimated empirically. If improved accuracy is required, program source code can be dimensionalized, and modified to read pile diameter, coefficient of drag and coefficient of mass for each depth from data files during integration.

Dimensionless forces per unit depth are:

$$f_{Dh} = \frac{C_D \rho D}{2} \cdot \frac{U(k/g)^{1/2}}{(k/g)^{1/2}} \left| \frac{U(k/g)^{1/2}}{(k/g)^{1/2}} \right| \qquad f_{Ih} = \frac{C_M \rho \pi D^2}{4} \frac{DU}{Dt} \cdot \frac{g}{g}$$

$$= \frac{C_D \rho D}{2} U^* |U^*| \cdot \frac{g}{k} \qquad = \frac{C_M \rho \pi D^2}{4} \frac{DU^*}{Dt^*} \cdot g$$

$$= \frac{C_D \rho g D}{2k} (f_{Dh})^* \qquad = \frac{C_M \rho g \pi D^2}{4} (f_{Ih})^* \qquad (17a \ \& \ b)$$

where $(f_{Dh})^* = U^* |U^*|$ and $(f_{Ih})^* = \frac{DU^*}{Dt^*}$

Similarly, depth-integrated dimensionless forces are:

$$F_{Dh} = \frac{C_D \rho g D}{2k^2} (F_{Dh})^* \qquad F_{Ih} = \frac{C_M \rho g \pi D^2}{4k} (F_{Ih})^* \qquad (18a \ \& \ b)$$

where $(F_{Dh})^* = \int_0^S U^* |U^*| \, dS^*$ and $(F_{Ih})^* = \int_0^S \frac{DU^*}{Dt^*} \, dS^*$

Dimensionless moments per unit depth are:

$$m_{Dh} = \frac{C_D \rho g D}{2k^2} (m_{Dh})^* \qquad m_{Ih} = \frac{C_M \rho g \pi D^2}{4k} (m_{Ih})^* \qquad (19a \ \& \ b)$$

where $(m_{Dh})^* = U^* |U^*| S^*$ and $(m_{Ih})^* = \frac{DU^*}{Dt^*} S^*$

Depth-integrated dimensionless moments:

$$M_{Dh} = \frac{C_D \rho g D}{2k^3} (M_{Dh})^* \qquad M_{Ih} = \frac{C_M \rho g \pi D^2}{4k^2} (M_{Ih})^* \qquad (20a \ \& \ b)$$

where $(M_{Dh})^* = \int_0^S U^* |U^*| \, S^* \, dS^*$ and $(M_{Ih})^* = \int_0^S \frac{DU^*}{Dt^*} \, S^* \, dS^*$

III. Program Development.

Program development came in two phases: modification to suit the computer used, and expansion to provide accelerations, forces and moments. Programming philosophy was to:

- o Minimize changes to Fenton's code as much as possible.
- o Provide screen output of program progress.
- o Maximize economy of code; minimize execution time.
- o Write new code in small subroutines to ease debugging and adaptation of code for further applications.

Source code is provided in Appendix 1.

A. Adaptation to Microcomputer. The program was adapted on an IBM (TM) PC XT using the IBM PC FORTRAN complier V2.00. The following modifications were required.

1) Intrinisic functions must be specified as single- or double-precision; e.g. DSIN for double precision.

2) The lower boundary of arrays cannot be zero, complicating the code for the "COSA" and "SINA" arrays. This problem was solved in a straightforward, if not elegant fashion. Since COS (0) = COS (2π) and SIN (0) = SIN (2π), these values are substituted when required by subroutines "EQNS" and "OUTPUT".

3) Some other minor modifications were made. Matrix dimensions were enlarged to 59, to permit a problem with up to 24 Fourier coefficients to be solved. If a PARAMETER statement were available for this compiler, adjusting array dimensions would be much easier.

4) The number of iterations permitted for each height step before it is assumed that the solution will not converge was increased from 9 to 18. This allows examination of convergence

characteristics for problems where the program oscillates about a solution, but does not converge.

5) Screen output is added to display program progress during execution. As will be shown later, execution time is not trivial on a microcomputer, ranging from two minutes when 10 Fourier coefficients are employed, to over 45 minutes using 24 Fourier coefficients, even with an 8087 numerical coprocessor and a hard disk installed. The height step, iteration number, and the value of one element of the solution vector are displayed so that solution progress may be traced. When wavelength is specified, kH and kd remain constant and do not show progress of the solution; therefore, $k\eta_1$ was selected for display. A relative plot of $k\eta_1$ vs. iteration number illustrates program convergence.

B. <u>Expansion of Subroutine "POINT"</u>. Subroutine "POINTND" expands "POINT" to include accelerations, forces and moments. Some minor code modfications are provided to minimize computations. Due to added features, the program was divided into subroutines to ease development and clarity. Computation of U_x and Uy (equations (12a & b)) is performed in the same loop as velocities, in new subroutines "FINITE" and "DEEP." Accelerations, and the forces per unit depth are calculated next, along with pressure, as in "POINT." In finite-depth problems, moments are computed about the bottom. In deep water problems, water depth is not provided. Here, moments are summed about a point at a depth equal to one-half of the wavelength, below which wave-induced motion is negligible. That depth is: $y = -L/2$; $ky = (2\pi/L)\cdot(-L/2) = -\pi$. Be certain that kd is greater than π if the deep water method is used. If not, local output will be computed beneath the bottom.

Depth-integrated forces and moments are computed using the trapezoidal rule in the new subroutine "INTEG", using 25 steps equally spaced between the surface and the bottom (or to depth $ky = -\pi$ for deep water). In deep water, particularly with long waves, 25 vertical steps may not provide sufficient accuracy. Two convenient changes can overcome such a problem. If values are required only to a certain depth, less than $ky = -\pi$, then only compute forces to that depth. Enter a line of code in "POINTND" setting a variable "DOVERH" equal to the depth desired over wave height. Then, substitute the following line of code:

```
BOTTOM = Z(2)*DOVERH, in place of: BOTTOM = PI
```

If values are required to depth $ky = -\pi$, then the number of vertical steps can be increased. Tables for two values of phase angle fit on a 66-line page when 25 steps are used, making print-out convenient. Using 58 steps puts one table on a page, without the need to modify any format statements.

Surface elevations, velocities and accelerations are plotted versus phase angle using the new subroutines "PLOTTER" and "SUBPLOT". These plots permit examination of the solution for smoothness and shape, as described later. To standardize plot size, 48 values are computed between crest and trough.

IV. Program Operation.

To ease operation, data input, modification, and printing are performed through data files, rather than via screen input or printer output.

A. Input. Data input files are prepared in the same dimensionless format as in Fenton's original program. Data files can be created using any text editor which does not add any additional control characters. The line editor that is a part of most operating systems is adequate. Any unused file name may be selected. The format follows:

<DEPTH> [HOVERD]	e.g.	'FINITE' 0.583909
<CASE> [HEIGHT]		'PERIOD' 1.858611E-03
<CURRNT> [VALUE]		'EULER' 0.0
[N] [NSTEP]		18 4

Input variables are defined in the main program source code. Be sure that string values are in apostrophes, and that real values include a decimal point.

The first two lines of this file are straightforward. Current is a value which has often been ignored, and such data may not be precisely available. Certainly a range of values can be determined. The solutions using the mean and extreme possible values of current can be found, and controlling output parameters selected. This process will also demonstrate the importance of considering current.

Selection of the number of Fourier coefficients "N" and height steps "NSTEP" requires some insight into and experience with the solution. In general, steeper waves required more height steps, while longer waves require more Fourier coeffients. The section on "convergence" provides more information and examples; however, this is a topic on which further research is needed.

B. Output. Two data output files are created: a solution file prepared by the main program and the subroutine "OUTPUT", and a file of local depth-dependent variables, created by the main program and the subroutine "POINTND." Plots are also provided for surface elevation, velocities and accelerations versus distance, time or phase angle, from crest to trough.

The solution file contains the solution vector for each iteration, and values for a variety of integral quantities which are not a function of location in the solution field. Review of the solution vector can provide valuable insight into how the problem converged. It is formatted for an 80-column printer. See Appendix 2 for examples.

The local variable output file contains part of the final solution vector, followed by tables of local variables vs. depth for selected values of phase angle. The phase angles selected are concentrated near the crest, the region of greatest interest, particularly in shallow water. Output is in dimensionless form; see Appendix 3 for samples and Appendix 4 for definition of each variable. Note that the depth-integrated values are the forces and moments from the depth indicated to the surface. The value from one depth to another is simply the difference between the values indicated at those depths. Plots of surface elevation, velocities, and accelerations follow the tables. The plots give a good "feel" for the solution, and can be used to identify potential problems. (see "Accuracy" section).

C. Running the Program. To run the program, prepare a data input file and then type FENTON <return>. Enter the name of the data input file as unit 5 when asked. Units 6 and 7 are solution

and local variable output files, respectively. Be sure to use a new file name for units 6 and 7; if a filename is selected that already exists in the current directory (e.g. FENTON.EXE), it will erase the existing file before writing over it. Also be certain to have at least 80K bytes of memory on the disk in use; that is the approximate requirement for the output files. See Appendix 5 for a sample screen input and display during run.

The program should run as-is on any IBM PC or compatible computer (one that uses the MS DOS (version 2) operating system, the 8086-family of processors, and the same disk format as an IBM-PC). Minimum hardware requirements are 192K RAM and one double-sided, or two single-sided disk drives. If the program is copied onto a disk formatted with the "/8" switch (for 8 sectors per track, 320K per disk), the program should run on a computer using MS-DOS version 1, although the code cannot be modified on such a computer. Due to program size (over 100K) and execution time, adaptation to a computer using an 8-bit processor is impractical.

The code was compiled using the 8087 EMULATOR library. This library permits the program to run on computers with the 8087 numerical coprocessor, to take advantage of its speed and accuracy. The program will run without the 8087 chip, with the same accuracy, but much slower (by a factor of about 13). If smaller code is important, the program may be recompiled by using the 8087ONLY library, but it will then only run if the computer has an 8087 chip installed.

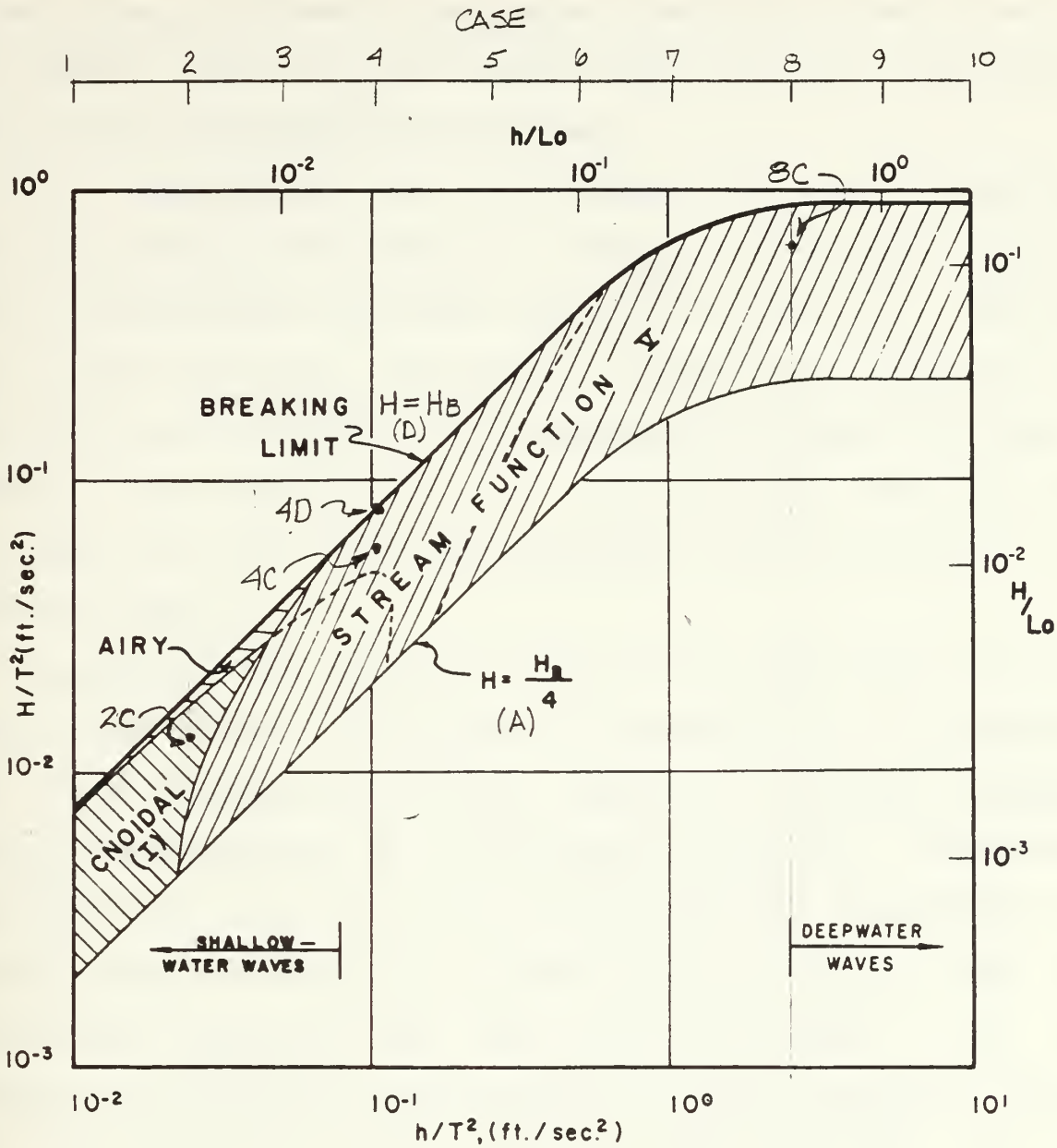
V. Program Performance.

Rienecker and Fenton (1981) demonstrate the accuracy of their method as compared with that of Vanden-Broeck and Schwartz (1979) and Cokelet (1977), showing agreement to seven decimal places. Values for local variables are compared here with those of Dean (1974), and show good agreement. Convergence is also examined, and examples of problems to look for and solutions are provided. Run time on the personal computer is significant, and is analysed in detail.

A. Accuracy. The solution obtained using the microcomputer was identical to that obtained on a VAX 11/750 by Dr. Fenton, to the level of accuracy of data available (7 significant figures). Double precision and the 8087 numerical coprocessor, with its 64 bit floating point arithmetic, are employed.

The solution for local variables is compared with that of Dean (1974). Since Dean's tables assume that the Eulerian mean current velocity $c_e = 0$, only those solutions can be compared. To avoid interpolation, problems for which Dean's tables were created are solved, and exact locations compared. Figure 2 (Dean, 1974) illustrates the range of cases examined. Appendix 6 presents a summary of comparisons; output files from which the variables came are provided in Appendix 3. Case 8C, at the point between deep and transitional water, is computed using both the deep and finite methods, so differences may be examined.

The program is solved exactly only at N+1 points (N = the number of Fourier coefficients) spaced uniformly from crest to trough. Many of the phase angles at which values are computed will be between those points. No attempt is made to approximate



Periodic wave theories providing best fit to dynamic free surface boundary condition (Analytical and Stream Function V theories)

(DEAN, 1974)

those values using some higher order interpolation technique. In most cases, the sum of the Fourier coefficients is sufficiently accurate for engineering applications.

B. Convergence. For most problems, the method proves very robust, converging very quickly. Selection of a proper number of Fourier coefficients and height steps is the key to an efficient and accurate solution. Too few will result in no solution or an innacurate one; too many will unnecessarily increase run time. In general, the steeper the wave, the more height steps required. The longer the wave (shallower the water) the more Fourier coefficients needed.

Convergence was achieved in deep water cases using only one Fourier coefficient. In addition, convergence could be achieved when wave steepness H/L was well beyond the limiting steepness. Clearly, convergence is no guarantee of accuracy. Dean (1965) increased the number of coefficients until the differences between values in the local solution and the values of the next lower-order solution were less than one percent. When this procedure was applied to the problems with wave steepness greater than the theoretical limit, more and more iterations were required for convergence, until finally convergence did not occur. Before that point was reached, the solution departed from that of a typical monocromatic wave, with large variations in surface profile. Applying Dean's procedure to waves which exist in theory showed that adding coefficients beyond a certain number caused insignificant changes in output.

In shallow water, a minimum number of Fourier coefficients is typically required for the solution to converge. Still,

convergence does not guarantee accuracy. Dean's case 4C converged using 8 Fourier coefficients, but pertubations in the surface profile are apparent, shown most clearly in the trough (Appendix 3.4C). Increasing the number of coefficients to 17 reduced the pertubations such that they are less than the accuracy of the plotting technique, providing a smooth curve. Examination of velocities and accelerations reveals only minor changes when more coefficients are used.

Convergence was not achieved for Dean's case 4D (at the theoretical breaking limit) using 18 Fourier coefficients. The solution oscillated about a value near Dean's solution, but would not converge. Reducing H/d to 97% of the breaking limit resulted in convergence, with pertubations in the surface profile (Appendix 3.4D). When 23 coefficients were employed, pertubations were smaller, but still evident. To achieve accuracy for problems in this range, the program must be modified to either permit use of even more coefficients (with the accompanying increase in run time), or to interpolate between the points where the solution is exact. Examination of maximum horizontal velocities and accelerations shows how close this solution is to the breaking limit. Horizontal velocity at the crest is 97% of wave speed. The plot does not provide sufficient horizontal resolution to be certain of maximum horizontal acceleration, but it is at least 82% of acceleration due to gravity.

An unusual phenomena was observed when considering very long, steep waves. Dean's case 2C is a good example. The solution took over 10 iterations to converge in the first of 4 height

steps; the remaining height steps converged more quickly. The resulting surface elevation is shown in Appendix 3.2C. The appearance of the second crest is not a desired output. Fenton (1984) demonstrated that by increasing the number of height steps from 4 to 8, the problem converges to the desired monocromatic solution. He postulates that the linear solution does not provide a sufficiently accurate starting point for this wave. The program instead found a solution which satisfied all of the boundary conditions, of length 1/3. He then suggests using cnoidal theory as the initial solution, or using more height steps. He selects the latter method in the interest of minimizing program complexity.

It must be stressed that this is a very long wave, in very shallow water. For example, for a typical period of 12 seconds, wave height is just 0.66 meters, and water depth only 1.1 meters. Even for an extreme period of 22 seconds, wave height is just 2.2 meters, and water depth, 3.8 meters. It is doubtful that such a wave would control design in most applications.

The following general recommendations can be made from limited experience with the program to date.

1) Before running the program, be certain that input variables are within the range of theoretical existence of the wave; that is, steepness and height over depth are less than theoretical limits. With no current, convergence was achieved up to $H/d = 0.75$ in shallow water, and $H/gT^2 = 0.026$ in deep water.

2) The screen plot provides an early indication of the convergence pattern. Display of Dean's case 4C, shown in

Appendix 5, is a typical example of a program where convergence was quickly achieved. One to three significant figures of accuracy are added with each iteration. Following that is an example of a problem which oscillated about a solution, but did not converge. From the display, the user can typically judge if the program will converge by about the 5th iteration, and terminate the run manually to save computer time. If $k\eta_1$ is beyond the range $0 < k\eta_1 < 1$ at any iteration, convergence will not occur.

3) Probably most important, the program must be run and evaluated by someone familiar with both the physics and the mathematics of the problem. The program is not fail-safe, and misapplication can cause one to wrongly conclude that it does not work. Worse yet, a solution which has not been adequately evaluated may be improperly applied in practice.

C. Run time. Run time varies with the computer system used; whether or not an 8087 chip is installed; whether floppy disks, hard disk or RAM disk is used for memory, and the type of processor itself. Execution times were recorded for an IBM PC XT, with an 8088 processor (clock time 4.77 MHz), hard disk, and with an 8087 chip installed.

The type of problem also affects run time. The number of iterations required for convergence can only be estimated. Each height step takes a minimum of three iterations, and the last may take from three to nine iterations, for a problem which eventually converges. Run time per iteration is fairly consistent, depending somewhat upon depth ("deep" or "finite") and strongly on number of Fourier coefficients N. For the finite case, run time per iteration (in seconds) can be approximated by the

following equation:

$$T = (1/30)N^{2.65}$$

A deep water problem takes about 15% less time per iteration. If an 8087 chip is not installed, run time is about 13 times longer.

Run time for the subroutine "POINTND" is not so drastically affected by number of coefficients, and takes from one to two minutes to complete.

VI. EFFECT OF CURRENT.

In many engineering applications of wave forces, the effect of current on the solution is ignored, due to lack of understanding of its impact, or due to lack of current data. Approximating zero current is reasonable for order-of-magnitude analyses using linear wave theory. If any significant current is possible, it is inconsistent to ignore it in final design, while at the same time taking the time and effort to compute a non-linear solution.

The extensive tables created by Dean (1974) assume zero mean current velocity. To include current would require a set of such tables for various current conditions, adding another dimension to the interpolation process. With the availability of Fenton's computer program, solutions for exact value of current are available. Deep and shallow water examples follow.

A. Shallow Water. Dean's case 4C ($H=0.75H_b$) is the shallow water example. A wave of height 5 meters is examined, first with no current and then with a moderate 1 meter/second (~2 knot) current, both opposing and assisting the wave. The assisting current caused a 10% decrease in wave number (or increase in wavelength); the opposing current had the opposite effect. The

surface profile plot does not readily reveal the impact of current, since it is automatically scaled from crest to trough. The phase angle at which the water surface crosses the still water level is 45 degrees with no current; decreasing to 42 degrees with an assisting current. However, the absolute distance from crest to the point at which the water surface crosses the still water level increases from 21.4 meters to 22.2 meters with assisting current.

Upon first observation, changes in horizontal surface velocities appear to reach 15% when considering current. When output is dimensionalized, and the constant 1 m/s current is subtracted, the differences are revealed to be minor, affecting only the third significant figure. The variations in acceleration are more obvious, as they are non-dimensionalized by acceleration due to gravity, and have no offset as horizontal velocities do. The difference is only about 3%.

Since current is non-dimensionalized by $\sqrt{gH}$, a reduction in height by a factor of four doubles the effect of current. For a 1 m/s current on a 1.25 meter wave, wavelength is changed by 20%, a fairly linear effect. The percentage change in velocities and accelerations is about doubled as well.

Interestingly, the differences in output changes with depth. For instance, the 1 m/s assisting current causes maximum horizontal acceleration of the 5 meter wave to decrease by 1.5% at the surface, but to increase by 6% at the bottom. Again, the effect is approximately doubled for a wave of wave of one-fourth the height, and the same current.

B. <u>Deep Water</u>. A deep water case (Dean's case 8C), was then

examined. Again, a wave height of 5 meters and current of 1 m/s was selected. Wavelength changed by 18%, in the same manner as in shallow water. The phase angle at which the water surface crosses the still water level, however, increased from 78.75 degrees with no current to 80.75 degrees with an assisting current. Of course, the absolute distance from crest to the point where the water surface crosses the still water level increased when assisting current was considered.

Changes in surface velocities and accelerations are much more pronounced in deep water. The 1 m/s assisting current caused a 5% drop in maximum vertical velocity, and an 18% decrease in maximum horizontal velocity, after compensating for the 1 m/s current. Maximum vertical accelerations decreased by 18% as well. Again, doubling the effect of current by dividing height by four caused the percentage changes in velocities and accelerations to double. Opposing current could not be examined for this particular case, because it increased the steepness beyond the limits of convergence.

The reason for the difference in effect of current between deep and shallow water is not completely clear. One reasonable explanation is the horizontal velocity profiles. As water becomes more shallow, the horizontal velocity profile becomes more constant from surface to the bottom. The effect of current then becomes more constant throughout the solution field. In deep water, horizontal velocities decrease to near zero (relative to the current) at a depth $y = -L/2$. The effect of current varies across the solution field, causing the much greater impact on the solution itself.

VII. Topics for Further Investigation.

As with many studies, more questions were raised during this effort than were answered. The following is a partial listing of ideas for continued work.

A. Development of subroutines for additional engineering applications of the program. One example is a dimensional version of "POINTND." The principle advantage of such a version would be the ability to sum drag and inertia forces and moments, and plot the total and their components using "PLOTTER." Maximum total forces and moments may then be determined.

B. The main program could be modified to write the solution vector Z(2N+10) to a file. If more application subroutines were developed, they could be modified to be run from this solution vector file, instead of as an automatic follow-on to the main program. The time-consuming process of solving the simultaneous differential equations would then be kept seperate from the applications, and only those required need be run.

C. If the modifications indicated in (C) above are made, then "POINT" could be made more flexible, so that the output may be tailored to the user's needs. In a deep water problems, limiting the vertical range over which the problem is solved to a range of interest will improve the vertical resolution and therefore the accuracy of the depth-integrated values. In shallow water problems, limiting the horizontal range from the crest to, say, the point where the water surface crosses the still water level, will provide improved horizontal resolution in the area of immediate interest. For instance, case 4D demonstrates that higher horizontal resolution in the vicinity of the crest is

needed, particularly for horizontal accelerations (and therefore inertia forces and moments) to be certain of the peak values. If "POINT" could be run again, from the crest to a phase angle of 45 degrees, the resolution would be quadrupled, and all the maximum values displayed, but more accurately.

D. A detailed study of convergence characteristics would aid in determining the optimum number of height steps and Fourier coefficients to achieve convergence and accuracy. A chart (or program) to provide that information would simplify the guesswork, and minimize computer time by reducing total number of iterations (and eliminating runs which do not converge or converge to inaccurate solutions).

E. An interpolation subroutine to smooth the values between the exact solution points would be valuable for waves near the breaking point.

F. A more thorough study of the effect of current on the solution is indicated. Current is rarely uniform throughout depth in nature, and the impact of a realistic current-depth profile would show if the assumption of a mean current is satisfactory. Also, the interaction between waves and current should be investigated.

G. When an updated Fortran compiler becomes available, the following simplifications can be made:

1) Use a parameter statement to ease changing of array dimensions.

2) If complex numbers are available, use the more computationally efficient Watt iteration method to calculate the sum of sines and cosines may possibly improve runtime.

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1. SOURCE CODE

```
      PROGRAM STEADY
C CALCULATION OF STEADY WAVES
CC PROGRAM DEVELOPED USING FORTRAN77 ON A VAX 11/750 BY J. D. FENTON
CC  SCHOOL OF MATHEMATICS, UNIVERSITY OF NEW SOUTH WALES
CC            KENSINGTON, N.S.W., AUSTRALIA  2033
CC PAPER SUBMITTED TO 'COMPUTERS & GEOSCIENCES', NOVEMBER 1983
CC
CC THIS VERSION ADAPTED TO MICROCOMPUTERS USING THE IBM (TM) PC AND
CC IBM FORTRAN COMPILER V.2.00 (MICROSOFT (TM) FORTRAN V.3.20).
CC DELETED LINES REMAIN AS COMMENTS; COMMENTS ALSO INDICATE NEW OR
CC CHANGED LINES. CHANGES ARE SUMMARIZED BELOW:
CC    --MS FORTRAN REQUIRES ARRAY LOWER BOUNDARIES TO BE 1.
CC    --AN IMPLICIT STATEMENT DOES NOT ALTER THE TYPE OF INTRINSIC
CC        FUNCTION; THEY MUST BE GIVEN IN PRECISION REQUIRED (E.G.
CC        DSIN(X) FOR DOUBLE PRECISION).
CC    --SUBROUTINE POINT IS CALLED, AND MODIFIED TO INCLUDE
CC        ACCELERATIONS, FORCES AND MOMENTS
CC THIS VERSION PRODUCES DIMENSIONLESS OUTPUT
C
      IMPLICIT DOUBLE PRECISION(A-H,K-L,O-Z)
      CHARACTER*10 DEPTH,CASE,CURRNT,UNITS
      COMMON /ONE/N,NUM,PI,HOVERD,HEIGHT,VALUE,DEPTH,CASE,CURRNT
CC    COMMON /TWO/Z(41),COSA(0:41),SINA(0:41),COEFF(41),SOL(41,2),Y(41)
CC LOWER BOUNDARY OF ARRAY CANNOT BE CHANGED TO ZERO.
      COMMON /TWO/Z(59),COSA(59),SINA(59),COEFF(59),SOL(59,2),Y(59)
      DIMENSION RHS1(59),RHS2(59),A(59,59),B(59),IPVT(59)
C
CC SUBROUTINES: INIT, EQNS, PLOT, OUTPUT, POINTND, PLOTTER, SUBPLOT
CC LINPACK ROUTINES: DGEFA, DGESL; BLAS: DAXPY, DSCAL, IDAMAX, DDOT
CC
CC WRITE INSTRUCTIONS TO SCREEN
CC
      WRITE(*,30)
      WRITE(*,31)
CC
C INPUT DATA
C
C       "DEPTH" IS EITHER 'DEEP' OR 'FINITE'.
C       "HOVERD IS WAVE HEIGHT OVER DEPTH
      READ(5,*)DEPTH,HOVERD
C     "CASE" IS EITHER 'PERIOD' OR 'WAVELENGTH'.
C       "HEIGHT" IS HEIGHT/LENGTH IF "CASE" IS 'WAVELENGTH'.
C       "HEIGHT' IS HEIGHT/(G*T**2) IF "CASE" IS 'PERIOD'.
      READ(5,*)CASE,HEIGHT
C       "CURRNT"IS EITHER 'EULER' OR 'STOKES'.
C       "VALUE" IS THE MAGNITUDE OF THE MEAN EULERIAN OR STOKES
C          VELOCITIES NON-DIMEN. W/ RESPECT TO WAVE HEIGHT.
      READ(5,*)CURRNT,VALUE
C       "N"IS THE NUMBER OF TERMS IN THE FOURIER SERIES AND THE
C          NUMBER OF INTERVALS IN HALF A WAVELENGTH.
C       "NSTEP"IS THE NUMBER OF STEPS IN WAVE HEIGHT.
      READ(5,*)N,NSTEP
C       "NUMBER"IS THE NUMBER OF ITERATIONS FOR EACH WAVE HEIGHT STEP.
      NUMBER=18
C       "CRIT" IS THE CRITERION FOR CONVERGENGE. IF THE SUM OF
C          MAGNITUDES OF CORRECTIONS IS SMALLER THAN CRIT, THE
C          ITERATION STOPS.
      CRIT=1.D-3
      NUM=2*N+10
```

```
 60        PI=4.D0*DATAN(1.D0)
 61        DHE=HEIGHT/NSTEP
 62        DHO=HOVERD/NSTEP
 63 CC
 64 CC LABEL OUTPUT FILES
 65 CC
 66        DO 15 I=6,7
 67          WRITE(I,30)
 68          WRITE(I,20)DEPTH,HOVERD
 69          WRITE(I,21)HEIGHT,CASE
 70   15     WRITE(I,22)CURRNT,VALUE
 71 C
 72 C COMMENCE STEPPING THROUGH STEPS IN WAVE HEIGHT.
 73 C
 74        DO 1 NS=1,NSTEP
 75        HEIGHT=NS*DHE
 76        HOVERD=NS*DHO
 77        WRITE (6,23)NS,NSTEP
 78 CC
 79 CC  SCREEN OUTPUT DURING RUN
 80 CC
 81        WRITE (*,23)NS,NSTEP
 82        WRITE(*,28)
 83 C
 84 C CALCULATE INITIAL LINEAR SOLUTION.
 85 C
 86        IF(NS.LE.1)THEN
 87          CALL INIT
 88        ELSE
 89 C
 90 C OR, EXTRAPOLATE FOR NEXT WAVE HEIGHT, IF NECESSARY.
 91 C
 92          DO 3 I=1,NUM
 93   3      Z(I)=2.*SOL(I,2)-SOL(I,1)
 94        ENDIF
 95 C
 96 C COMMENCE ITERATIVE SOLUTION
 97 C
 98        DO 4 ITER=1,NUMBER
 99          WRITE(6,24)ITER
100 C
101 C CALCULATE RIGHT SIDES OF EQUATIONS AND DIFFERENTIATE NUMERICALLY
102 C TO OBTAIN JACOBIAN MATRIX.
103 C
104          CALL EQNS(RHS1)
105            DO 5 I=1,NUM
106            H=0.01*Z(I)
107            IF(DABS(Z(I)).LT.1.D-4)H=1.D-5
108            Z(I)=Z(I)+H
109            CALL EQNS(RHS2)
110            Z(I)=Z(I)-H
111            B(I)=-RHS1(I)
112              DO 6 J=1,NUM
113    6         A(J,I)=(RHS2(J)-RHS1(J))/H
114    5       CONTINUE
115 C
116 C SOLVE MATRIX EQUATION AND CORRECT VARIABLES,USING 'LINPACK' ROUTINES.
117 C
118 C THE MATRIX EQUATION [A(I,J)][CORR'N VECTOR]=[B(I)] IS TO BE SOLVED.
```

```
2   119 C
    120         CALL DGEFA(A,59,NUM,IPVT,INFO)
2   121         IF(INFO.NE.0)THEN
2   122           WRITE(6,27)INFO
2   123           STOP
2   124         ENDIF
2   125         CALL DGESL(A,59,NUM,IPVT,B,0)
2   126 C
2   127 C THE B(I) ARE NOW THE CORRECTIONS TO EACH VARIABLE.
2   128 C
2   129         SUM=0.D0
2   130           DO 7 I=1,NUM
3   131           SUM=SUM+DABS(B(I))
3   132     7     Z(I)=Z(I)+B(I)
2   133         WRITE(6,25)(Z(I),I=1,NUM)
2   134 CC
2   135 CC PROVIDE SCREEN OUTPUT DURING RUN
2   136 CC
2   137         CALL PLOT(ITER,Z(10))
2   138 CC
2   139         CRITER=CRIT
2   140         IF(NS.EQ.NSTEP)CRITER=0.001*CRIT
2   141         IF(SUM.LT.CRITER)GOTO 8
2   142     4   CONTINUE
1   143       WRITE(6,26)NUMBER
1   144       STOP
1   145     8 IF(NS.EQ.1)THEN
    146         DO 9 I=1,NUM
2   147     9   SOL(I,2)=Z(I)
1   148       ELSE
1   149         DO 10 I=1,NUM
2   150         SOL(I,1)=SOL(I,2)
2   151    10   SOL(I,2)=Z(I)
1   152       ENDIF
1   153     1 CONTINUE
    154 C
    155 C OUTPUT OF RESULTS
    156 C
    157       CALL OUTPUT
    158 CC
    159 CC COMPUTE LOCAL VALUES OF VELOCITY, ACCELERATION AND PRESSURE
    160 CC
    161       CALL POINTND
    162 CC
    163    20 FORMAT(//,'DEPTH: ',A6,', HEIGHT/DEPTH=',F7.4)
    164    21 FORMAT(/,'WAVE HEIGHT',1PG13.6,',DIMENSIONLESS WITH RESPECT TO ',
    165      1A10)
    166    22 FORMAT(/,' CURRENT CRITERION: ',A6,', MAGNITUDE=',F5.2)
    167    23 FORMAT(/,' HEIGHT STEP ',I2,' OF ',I2)
    168    24 FORMAT(/,' ITERATION ',I3)
    169    25 FORMAT(/,' SOLUTION VECTOR',12(/,6(1PG13.5)))
    170    26 FORMAT(/,'DID NOT CONVERGE SUFFICIENTLY AFTER',I3,' ITERATIONS.')
    171    27 FORMAT(/,' MATRIX SINGULAR, INFO = ',I4)
    172 CC
    173    28 FORMAT(/,' ITER.       Z(10)',/)
    174    30 FORMAT(' STEADY WATER WAVE COMPUTATION USING THE FOURIER APPRO',
    175      1'XIMATION METHOD OF',/,19X,'M. M. RIENECKER AND J. D. FENTON.')
    176    31 FORMAT(' UNIT 5 IS THE DATA INPUT FILE, UNIT 6 IS THE SOLUTION',
    177      1' OUTPUT FILE,',/,' UNIT 7 IS THE LOCAL VARIABLE OUTPUT FILE.',/)
```

```
D Line# 1      7
    178        STOP
    179        END
```

Name	Type	Offset	P	Class
A	REAL*8	1182		
B	REAL*8	29030		
CASE	CHAR*10	50		/ONE /
COEFF	REAL*8	1416		/TWO /
COSA	REAL*8	472		/TWO /
CRIT	REAL*8	29510		
CRITER	REAL*8	29598		
CURRNT	CHAR*10	60		/ONE /
DABS				INTRINSIC
DATAN				INTRINSIC
DEPTH	CHAR*10	40		/ONE /
DHE	REAL*8	29518		
DHO	REAL*8	29526		
H	REAL*8	29562		
HEIGHT	REAL*8	24		/ONE /
HOVERD	REAL*8	16		/ONE /
I	INTEGER*4	29534		
INFO	INTEGER*4	29578		
IPVT	INTEGER*4	946		
ITER	INTEGER*4	29550		
J	INTEGER*4	29570		
N	INTEGER*4	0		/ONE /
NS	INTEGER*4	29538		
NSTEP	INTEGER*4	29502		
NUM	INTEGER*4	4		/ONE /
NUMBER	INTEGER*4	29506		
PI	REAL*8	8		/ONE /
RHS1	REAL*8	2		
RHS2	REAL*8	474		
SINA	REAL*8	944		/TWO /
SOL	REAL*8	1888		/TWO /
SUM	REAL*8	29582		
UNITS	CHAR*10	*****		
VALUE	REAL*8	32		/ONE /
Y	REAL*8	2832		/TWO /
Z	REAL*8	0		/TWO /

Name	Type	Size	Class
DGEFA			SUBROUTINE
DGESL			SUBROUTINE
EQNS			SUBROUTINE
INIT			SUBROUTINE
ONE		70	COMMON
OUTPUT			SUBROUTINE
PLOT			SUBROUTINE
POINTN			SUBROUTINE
STEADY			PROGRAM
TWO		3304	COMMON

```
D Line# 1      7                    IBM Personal Computer FORTRAN Compiler V2.00
 Pass One     No Errors Detected
             179 Source Lines
```

```
Line# 1      7                    IBM Personal Computer FORTRAN Compiler V2.00
      SUBROUTINE INIT
C SUBROUTINE TO CALCULATE INITIAL SOLUTION FROM LINEAR WAVE THEORY.
C
      IMPLICIT DOUBLE PRECISION(A-H,K-L,O-Z)
      CHARACTER*10 DEPTH,CASE,CURRNT
      COMMON /ONE/N,NUM,PI,HOVERD,HEIGHT,VALUE,DEPTH,CASE,CURRNT
CC    COMMON /TWO/Z(41),COSA(0:41),SINA(0:41),COEFF(41),SOL(41,2),Y(41)
CC LOWER BOUNDARY OF ARRAY CANNOT BE CHANGED TO ZERO.
      COMMON /TWO/Z(59),COSA(59),SINA(59),COEFF(59),SOL(59,2),Y(59)
      IF(DEPTH.EQ.'FINITE')THEN
        IF(CASE.EQ.'PERIOD')THEN
          A=4.*PI*PI*HEIGHT/HOVERD
          B=A/DSQRT(DTANH(A))
          T=DTANH(B)
          Z(1)=B+(A-B*T)/(T+B*(1.-T*T))
        ELSE
          Z(1)=2.*PI*PI*HEIGHT/HOVERD
        ENDIF
        Z(2)=Z(1)*HOVERD
        Z(4)=DSQRT(DTANH(Z(1)))
      ELSE
        Z(1)=-1.D0
        Z(4)=1.D0
        IF (CASE.EQ.'PERIOD')THEN
          Z(2)=4.*PI*PI*HEIGHT
        ELSE
          Z(2)=2.*PI*HEIGHT
        ENDIF
      ENDIF
      Z(3)=2.*PI/Z(4)
      IF(CURRNT.EQ.'EULER')THEN
        Z(5)=VALUE*DSQRT(Z(2))
        Z(6)=0.D0
      ELSE
        Z(6)=VALUE*DSQRT(Z(2))
        Z(5)=0.D0
      ENDIF
      Z(7)=Z(4)
      Z(8)=0.D0
      Z(9)=0.5*Z(7)**2
CC    COSA(0)=1.D0
CC    SINA(0)=0.D0
CC ZERO LOWER BOUNDARY NOT PERMITTED; USE COSA(2*PI)=COSA(0)
      Z(10)=0.5*Z(2)
        DO 1 I=1,N
        COSA(I)=DCOS(I*PI/N)
        COSA(I+N)=DCOS((I+N)*PI/N)
        SINA(I)=DSIN(I*PI/N)
        SINA(I+N)=DSIN((I+N)*PI/N)
        Z(N+I+10)=0.D0
    1   Z(I+10)=0.5*Z(2)*COSA(I)
      Z(N+11)=0.5*Z(2)/Z(7)
      WRITE(6,2)(Z(I),I=1,NUM)
    2 FORMAT(//,'*INITIAL LINEAR SOLUTION',12(,/6(1PG13.5)))
        DO 3 I=1,9
    3   SOL(I,1)=Z(I)
        SOL(I,2)=0.D0
        DO 4 I=10,NUM
    4   SOL(I,1)=0.D0
```

```
D Line# 1      7                          IBM Personal Computer FORTRAN Compiler V2.00
     60        RETURN
     61        END
```

Name	Type	Offset	F	Class
A	REAL*8	2		
B	REAL*8	10		
CASE	CHAR*10	50		/ONE /
COEFF	REAL*8	1416		/TWO /
COSA	REAL*8	472		/TWO /
CURRNT	CHAR*10	60		/ONE /
DCOS				INTRINSIC
DEPTH	CHAR*10	40		/ONE /
DSIN				INTRINSIC
DSQRT				INTRINSIC
DTANH				INTRINSIC
HEIGHT	REAL*8	24		/ONE /
HOVERD	REAL*8	16		/ONE /
I	INTEGER*4	26		
N	INTEGER*4	0		/ONE /
NUM	INTEGER*4	4		/ONE /
PI	REAL*8	8		/ONE /
SINA	REAL*8	944		/TWO /
SOL	REAL*8	1888		/TWO /
T	REAL*8	18		
VALUE	REAL*8	32		/ONE /
Y	REAL*8	2832		/TWO /
	REAL*8	0		/TWO /

Name	Type	Size	Class
INIT			SUBROUTINE
ONE		70	COMMON
TWO		3304	COMMON

```
 Pass One     No Errors Detected
              61 Source Lines
```

```
      SUBROUTINE EQNS(RHS)
C SUBROUTINE FOR EVALUATION OF EQUATIONS.
C
      IMPLICIT DOUBLE PRECISION(A-H,K-L,O-Z)
      CHARACTER*10 DEPTH,CASE,CURRNT
      COMMON /ONE/N,NUM,PI,HOVERD,HEIGHT,VALUE,DEPTH,CASE,CURRNT
CC    COMMON /TWO/Z(41),COSA(0:41),SINA(0:41),COEFF(41),SOL(41,2),Y(41)
CC LOWER BOUNDARY OF ARRAY CANNOT BE CHANGED TO ZERO.
      COMMON /TWO/Z(59),COSA(59),SINA(59),COEFF(59),SOL(59,2),Y(59)
      DIMENSION RHS(59)
      IF(DEPTH.EQ.'FINITE')THEN
        RHS(1)=Z(2)-Z(1)*HOVERD
      ELSE
        RHS(1)=Z(1)+1.D0
      ENDIF
      IF(CASE.EQ.'WAVELENGTH')THEN
        RHS(2)=Z(2)-2.*PI*HEIGHT
      ELSE
        RHS(2)=Z(2)-HEIGHT*Z(3)**2
      ENDIF
      RHS(3)=Z(4)*Z(3)-PI-PI
      RHS(4)=Z(5)+Z(7)-Z(4)
      RHS(5)=Z(6)+Z(7)-Z(4)
      IF(DEPTH.EQ.'FINITE')THEN
        RHS(5)=RHS(5)-Z(8)/Z(1)
        DO 2 I=1,N
    2   COEFF(I)=Z(N+I+10)/DCOSH(I*Z(1))
      ENDIF
      IT=6
      IF(CURRNT.EQ.'EULER')IT=5
      RHS(6)=Z(IT)-VALUE*DSQRT(Z(2))
      RHS(7)=Z(10)+Z(N+10)
        DO 1 I=1,N-1
    1   RHS(7)=RHS(7)+Z(10+I)+Z(10+I)
      RHS(8)=Z(10)-Z(N+10)-Z(2)
        DO 3 M=0,N
        PSI=0.D0
        U=0.D0
        V=0.D0
        IF(DEPTH.EQ.'FINITE')THEN
          DO 4 J=1,N
          NM=MOD(M*J,N+N)
          E=DEXP(J*(Z(1)+Z(10+M)))
          S=0.5*(E-1./E)
          C=0.5*(E+1./E)
CC FOLLOWING STATEMENT PERMITS COMPUTATION OF COSA(0)=COSA(2*PI)
          IF(NM.EQ.0)NM=N+N
          PSI=PSI+COEFF(J)*S*COSA(NM)
          U=U+J*COEFF(J)*C*COSA(NM)
          V=V+J*COEFF(J)*S*SINA(NM)
    4     CONTINUE
        ELSE
          DO 5 J=1,N
          NM=MOD(M*J,N+N)
          E=DEXP(J*Z(10+M))
CC FOLLOWING STATEMENT PERMITS COMPUTATION OF COSA(0)=COSA(2*PI)
          IF(NM.EQ.0)NM=N+N
          PSI=PSI+Z(N+J+10)*E*COSA(NM)
          U=U+J*Z(N+J+10)*E*COSA(NM)
```

```
D Line# 1      7                    IBM Personal Computer FORTRAN Compiler V2.00
2    60     5       V=V+J*Z(N+J+10)*E*SINA(NM)
'    61           ENDIF
.    62           RHS(M+9)=PSI-Z(8)-Z(7)*Z(M+10)
1    63           RHS(N+M+10)=0.5*((-Z(7)+U)**2+V**2)+Z(M+10)-Z(9)
1    64     3       CONTINUE
     65         RETURN
     66         END

Name    Type          Offset P Class

C       REAL*8            78
CASE    CHAR*10           50    /ONE    /
COEFF   REAL*8          1416    /TWO    /
COSA    REAL*8           472    /TWO    /
CURRNT  CHAR*10           60    /ONE    /
DCOSH                           INTRINSIC
DEPTH   CHAR*10           40    /ONE    /
DEXP                            INTRINSIC
DSQRT                           INTRINSIC
E       REAL*8            62
HEIGHT  REAL*8            24    /ONE    /
HOVERD  REAL*8            16    /ONE    /
I       INTEGER*4          2
IT      INTEGER*4         10
J       INTEGER*4         50
M       INTEGER*4         18
MOD                             INTRINSIC
!       INTEGER*4          0    /ONE    /
NM      INTEGER*4         58
NUM     INTEGER*4          4    /ONE    /
PI      REAL*8             8    /ONE    /
PSI     REAL*8            26
RHS     REAL*8             0 *
S       REAL*8            70
SINA    REAL*8           944    /TWO    /
SOL     REAL*8          1888    /TWO    /
U       REAL*8            34
V       REAL*8            42
VALUE   REAL*8            32    /ONE    /
Y       REAL*8          2832    /TWO    /
Z       REAL*8             0    /TWO    /


Name    Type            Size    Class

EQNS                            SUBROUTINE
ONE                       70    COMMON
TWO                     3304    COMMON


 Pass One     No Errors Detected
              66 Source Lines
```

```
D Line# 1      7                    IBM Personal Computer FORTRAN Compiler V2.00
      1        SUBROUTINE OUTPUT(NSTEP)
      2  C SUBROUTINE FOR OUTPUT OF RESULTS
      3  C
      4        IMPLICIT DOUBLE PRECISION(A-H,K-L,O-Z)
      5        CHARACTER*10 DEPTH,CASE,CURRNT
      6        COMMON /ONE/N,NUM,PI,HOVERD,HEIGHT,VALUE,DEPTH,CASE,CURRNT
      7  CC    COMMON /TWO/Z(41),COSA(0:41),SINA(0:41),COEFF(41),SOL(41,2),Y(41)
      8  CC LOWER BOUNDARY OF ARRAY CANNOT BE CHANGED TO ZERO.
      9        COMMON /TWO/Z(59),COSA(59),SINA(59),COEFF(59),SOL(59,2),Y(59)
     10  C CALCULATE FOURIER COEFFICIENTS OF SURFACE ELEVATIONS
     11          DO 10 J=I,N
1    12          SUM=0.5D0*(Z(10)+Z(N+10)*(-1.D0)**J)
1    13            DO 11 M=1,N-1
2    14  CC11      SUM=SUM+Z(10+M)*COSA(MOD(M*J,N+N))
2    15  CC FOLLOWING STATEMENTS PERMIT COMPUTATION OF COSA(0)=COSA(2*PI)
2    16            NM=MOD(M*J,N+N)
2    17            IF(NM.EQ.0)NM=N+N
2    18     11     SUM=SUM+Z(10+M)*COSA(NM)
1    19     10   Y(J)=2.*SUM/N
     20        WRITE(6,1)N,NSTEP
     21        WRITE(7,1)N,NSTEP
     22      1 FORMAT(//,'SOLUTION OF ORDER ',I3,' NON-DIMENSIONALIZED BY ',
     23       1'WAVE NUMBER, ',I2,' HEIGHT STEP(S).',/)
     24        IF(DEPTH.EQ.'FINITE')THEN
     25          WRITE(6,2)Z(1)
     26          WRITE(7,2)Z(1)
     27        ELSE
     28          WRITE(7,'(/)')
     29        ENDIF
     30      2 FORMAT(' WATER DEPTH                          ',1PG13.5,/)
     31        WRITE(6,3)(Z(I),I=2,9)
     32        WRITE(7,3)(Z(I),I=2,9)
     33      3 FORMAT(' WAVE HEIGHT                          ',1PG13.5,//,
     34       1' WAVE PERIOD                          ',1PG13.5,//,
     35       1' WAVE SPEED                           ',1PG13.5,//,
     36       1' MEAN EULERIAN FLUID SPEED            ',1PG13.5,//,
     37       1' MEAN MASS TRANSPORT SPEED            ',1PG13.5,//,
     38       1' MEAN FLUID SPEED RELATIVE TO WAVE    ',1PG13.5,//,
     39       1' VOLUME FLUX DUE TO WAVES             ',1PG13.5,//,
     40       1' BERNOULLI CONSTANT                   ',1PG13.5)
     41        WRITE(6,4)(Z(I),I=10,N+10)
     42      4 FORMAT(//,' SURFACE ELEVATIONS - CREST TO TROUGH',//,
     43       13(10(1PF8.4),/))
     44      5 FORMAT(/,' FOURIER COEFFICIENTS',//,10(5(I3,1PF10.6,3X),/))
     45        PULSE=Z(8)+Z(1)*Z(5)
     46        KE=0.5*(Z(4)*PULSE+Z(5)*(Z(8)-Z(7)*Z(1)))
     47        PE=0.5*(Z(10)**2+Z(N+10)**2)
     48          DO 7 I=1,N-1
1    49      7   PE=PE+Z(10+I)**2
     50        PE=PE/(2.*N)
     51        UB2=2.*Z(9)-Z(4)**2
     52        SXX=4.*KE-3.*PE+UB2*Z(1)+2.*Z(5)*(Z(7)*Z(1)-Z(8))
     53        F=Z(4)*(3.*KE-2.*PE)+0.5*UB2*(PULSE+Z(4)*Z(1))
     54       1+Z(4)*Z(5)*(Z(7)*Z(1)-Z(8))
     55        WRITE(6,8)PULSE,KE,PE,UB2,SXX,F
     56      8 FORMAT(/,' INTEGRAL QUANTITIES',//,
     57       1' IMPULSE                      ',1PE14.6,//,
     58       1' KINETIC ENERGY (T)           ',1PE14.6,//,
     59       1' POTENTIAL ENERGY (V)         ',1PE14.6,//,
```

```
D Line# 1      7                        IBM Personal Computer FORTRAN Compiler V2.00
     60       1' MEAN SQUARE OF BED VELOCITY ',1PE14.6,//,
     61       1' RADIATION STRESS (SXX)       ',1PE14.6,//,
     62       1' WAVE POWER (F)               ',1PE14.6)
     63        IF(DEPTH.EQ.'FINITE')THEN
     64          Q=Z(7)*Z(1)-Z(8)
     65          R=Z(9)+Z(1)
     66          S=SXX-2.*Z(4)*PULSE+(Z(4)**2+0.5*Z(1))*Z(1)
     67          WRITE(6,9)Q,R,S
     68    9     FORMAT(//,' INVARIANTS FOR FINITE DEPTH',//,
     69       1' VOLUME FLUX (Q)          ',F9.6,//,
     70       1' BERNOULLI CONSTANT (R) ',F9.6,//,
     71       1' MOMENTUM FLUX (S)        ',F9.6)
     72        ENDIF
     73        RETURN
     74        END

Name    Type          Offset P Class

CASE    CHAR*10          50    /ONE    /
COEFF   REAL*8         1416    /TWO    /
COSA    REAL*8          472    /TWO    /
CURRNT  CHAR*10          60    /ONE    /
DEPTH   CHAR*10          40    /ONE    /
F       REAL*8          868
HEIGHT  REAL*8           24    /ONE    /
HOVERD  REAL*8           16    /ONE    /
I       INTEGER*4         6
        INTEGER*4         2
KE      REAL*8          832
M       INTEGER*4        22
MOD                            INTRINSIC
N       INTEGER*4         0    /ONE    /
NM      INTEGER*4        30
NSTEP   INTEGER*4         0 *
NUM     INTEGER*4         4    /ONE    /
PE      REAL*8          840
PI      REAL*8            8    /ONE    /
PULSE   REAL*8          824
Q       REAL*8         1308
R       REAL*8         1316
S       REAL*8         1324
SINA    REAL*8          944    /TWO    /
SOL     REAL*8         1888    /TWO    /
SUM     REAL*8           14
SXX     REAL*8          860
UB2     REAL*8          852
VALUE   REAL*8           32    /ONE    /
Y       REAL*8         2832    /TWO    /
Z       REAL*8            0    /TWO    /


 ame    Type           Size    Class

ONE                      70    COMMON
OUTPUT                         SUBROUTINE
TWO                    3304    COMMON
 Pass One     No Errors Detected
              74 Source Lines
```

```
D Line# 1      7                    IBM Personal Computer FORTRAN Compiler V2.00
      1 C SUBROUTINE TO PLOT ITERATIVE SOLUTION TO SCREEN DURING RUN.
      2 C
      3 CC USE WITH MAIN PROGRAM STEADY
      4 C
      5        SUBROUTINE PLOT(ITER,X)
      6        IMPLICIT DOUBLE PRECISION(X)
      7        CHARACTER A(60)*1
      8        DATA A/60*' '/
      9        IF(ITER.EQ.1)THEN
     10          X1=X
     11          N=1
     12         ELSEIF(ITER.EQ.2)THEN
     13          X40=X
     14          N=40
     15          XR=X40-X1
     16        ELSE
     17          N=DINT((X-X1)*40./XR)
     18          IF(N.GT.60)N=60
     19          IF(N.LT.1)N=1
     20        ENDIF
     21        A(N)='*'
     22        WRITE(*,20)ITER,X,A
     23        A(N)=' '
     24   20   FORMAT(I3,1PG17.8,60A)
     25        RETURN
     26        END

Name    Type          Offset P Class

A       CHAR*1             2
DINT                            INTRINSIC
ITER    INTEGER*4          0 *
N       INTEGER*4         70
X       REAL*8             4 *
X1      REAL*8            62
X40     REAL*8            74
XR      REAL*8            82


Name    Type            Size    Class

PLOT                            SUBROUTINE


 Pass One     No Errors Detected
              26 Source Lines
```

```
Line# 1      7                    IBM Personal Computer FORTRAN Compiler V2.00
    1        SUBROUTINE POINTND
    2 C SUBROUTINE TO PROVIDE FORMATTED, DIMENSIONLESS OUTPUT USING SOLUTION
    3 C VECTOR FROM 'FENTON'
    4 C
    5 CC USE WITH MAIN PROGRAM 'FENTON'
    6 CC ACCELERATIONS, FORCES AND MOMENTS INCLUDED.
    7 CC
    8 CC SUBROUTINES SUBPOINT, VFINITE, VDEEP, INTEG, PLOTTER, SUBPLOT
    9 CC
   10        IMPLICIT DOUBLE PRECISION(A-H,K-M,O-Z)
   11        CHARACTER*10 DEPTH,CASE,CURRNT,UNITA,UNITB,UNITC,UNITD,W,
   12       1UNITAA,UNITAB,UNITUA,UNITUB
   13        COMMON /ONE/N,NUM,PI,HOVERD,HEIGHT,VALUE,DEPTH,CASE,CURRNT
   14        COMMON /TWO/Z(59),COSA(59),SINA(59),COEFF(59),SOL(59,2),Y(59)
   15        DIMENSION E1(49,3),U1(49,2),A(49,2),D(49,3),F(4),FS(4),F1(4)
   16        WRITE(*,27)
   17 CC
   18 CC INITIALIZE U,BOTTOM
   19 CC
   20        UO=Z(4)-Z(7)
   21        IF(DEPTH.EQ.'FINITE')THEN
   22          BOTTOM=Z(1)
   23        ELSE
   24          BOTTOM=PI
   25        ENDIF
   26 CC
   27 CC COMPUTE LOCAL VARIABLES FOR 49 VALUES OF KX, EVENLY SPACED ALONG L/2
   28 CC
   29        DO 2 IX=1,49
   30          X=IX-1.
   31 CC
   32 CC D(IX,N) IS THE ABSCISSA ARRAY; N=1 FOR ANGLE (DEGREES),2 FOR
   33 CC   DISTANCE KX (RADIANS) AND 3 FOR TIME (SECONDS*(K*G)**2)
   34 CC
   35          D(IX,3)=X*Z(3)/96.
   36          D(IX,2)=X*PI/48.
   37          D(IX,1)=X*3.75
   38 CC
   39 CC COMPUTE SURFACE ELEVATION
   40 CC
   41          COSA(N)=DCOS(N*D(IX,2))
   42          SINA(N)=DSIN(N*D(IX,2))
   43          E1(IX,1)=0.5*Y(N)*COSA(N)
   44          DO 1 J=1,N-1
   45            COSA(J)=DCOS(J*D(IX,2))
   46            SINA(J)=DSIN(J*D(IX,2))
   47     1      E1(IX,1)=E1(IX,1)+Y(J)*COSA(J)
   48 CC
   49 CC COMPUTE LOCAL VARIABLES FOR 25 VALUES OF KY, EVENLY SPACED BETWEEN
   50 CC   THE FREE SURFACE AND THE BOTTOM (OR TO D=L/2 FOR DEEP WATER).
   51 CC
   52          YRANGE=E1(IX,1)+BOTTOM
   53          YSTEP=YRANGE/24.
   54          YINT=YSTEP/2.
   55 CC
   56 CC COMPUTE SURFACE VELOCITIES, ACCELERATIONS, FORCES AND MOMENTS
   57 CC
   58          IY=1
   59          CALL SUBPOINT(KY,IX,IY,YSTEP,E1,UO,BOTTOM,U,V,AX,AY,PRESS,F)
```

```
 60 CC
 61 CC INITIALIZE INTEGRAL VARIABLES; SET PLOTTING ARRAY FOR VELOCITIES
 62 CC   (U1) AND ACCELERATIONS (A) TO VALUES FOR WATER SURFACE.
 63 CC
 64          DO 3 I=1,4
 65            F1(I)=F(I)
 66     3      FS(I)=0.D0
 67          U1(IX,1)=U
 68          U1(IX,2)=V
 69          A(IX,1)=AX
 70          A(IX,2)=AY
 71 CC
 72 CC WRITE SOLUTION AND COMPUTE VALUES BENEATH SURFACE ONLY FOR CERTAIN
 73 CC VALUES OF KX (CONCENTRATED AT CREST)
 74 CC
 75          IF(IX.LE.3)GOTO 10
 76          IF(IX.EQ.5)GOTO 10
 77          IF(IX.EQ.9)GOTO 10
 78          IF(IX.EQ.13)GOTO 10
 79          IF(IX.EQ.17)GOTO 10
 80          IF(IX.EQ.25)GOTO 10
 81          IF(IX.EQ.33)GOTO 10
 82          IF(IX.EQ.41)GOTO 10
 83          IF(IX.EQ.49)GOTO 10
 84          GOTO 2
 85    10    WRITE(7,22)D(IX,1),D(IX,2),HOVERD,HEIGHT,CASE
 86          WRITE(7,20)
 87          WRITE(*,28)IX,D(IX,1)
 88          WRITE(7,21)KY,U,V,AX,AY,PRESS,F,FS
 89          DO 9 IY=2,25
 90            CALL SUBPOINT(KY,IX,IY,YSTEP,E1,U0,BOTTOM,U,V,AX,AY,PRESS,F)
 91            CALL INTEG(F,F1,FS,YINT)
 92     9      WRITE(7,21)KY,U,V,AX,AY,PRESS,F,FS
 93     2  CONTINUE
 94 CC
 95 CC SET OUTPUT UNITS FOR PLOTTING SUBROUTINE.
 96 CC
 97        UNITA='    *K'
 98        UNITB='(K*G)^.5'
 99        UNITUA='    *SQRT'
100        UNITUB='(K/G)    '
101        UNITAA='  *1/G  '
102        UNITAB='  *1/G  '
103        UNITD=' DEGREES'
104 CC
105 CC PLOT SURFACE ELEVATION, VELOCITIES AND ACCELERATIONS.
106 CC
107        WRITE(7,23)
108        WRITE(7,29)
109        CALL PLOTTER(E1,D,UNITA,UNITB,UNITA,UNITD,1)
110        WRITE(7,25)
111        WRITE(7,29)
112        CALL PLOTTER(U1,D,UNITUA,UNITUB,UNITA,UNITD,2)
113        WRITE(7,26)
114        WRITE(7,29)
115        CALL PLOTTER(A,D,UNITAA,UNITAB,UNITA,UNITD,2)
116        WRITE(*,24)
117 CC
118    20  FORMAT(7X,'KY        U        V       AX       AY       PRESS',
```

```
119        16X,'FD          FI          MD          MI         FDS        FIS ',
120        2'       MDS        MIS',/)
121    21  FORMAT(3X,5F8.5,F9.5,8F10.7)
122    22  FORMAT(////,'SOLUTION VS DEPTH, THETA=',F6.2,' DEGREES,',
123        1' KX=',F7.4,' RADIANS, H/d=',F6.4,', WAVE HEIGHT=',1PG11.5,
124        2' DIMENSIONLESS W/RESP. TO ',A10,/)
125    23  FORMAT(///////,40X,'WATER  SURFACE  ELEVATION',35X,'ELEV.VS.    ',
126        1'TIME    DIST.    ANGLE')
127    24  FORMAT(/,' BE SURE TO USE CONDENSED MODE WHEN PRINTING LOCAL ',
128        1'SOLUTION.')
129    25  FORMAT(///////,21X,'HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER',
130        1' PARTICLE VELOCITIES',18X,'    U        V     DIST.    ANGLE')
131    26  FORMAT(///////,20X,'HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER',
132        1' PARTICAL ACCELERATIONS ',13X,'      Ax       Ay    DIST.    ANGLE')
133    27  FORMAT(/,' COMPUTING LOCAL SOLUTION',/)
134    28  FORMAT(' STEP ',I2,', THETA = ',F6.2,' DEGREES')
135    29  FORMAT('-------------------------------------------------------------',
136        1'-------------------------------------------------------------',
137        2'---------------')
138        RETURN
139        END
```

Name	Type	Offset	P	Class
A	REAL*8	3234		
AX	REAL*8	4106		
AY	REAL*8	4114		
BOTTOM	REAL*8	4026		
CASE	CHAR*10	50		/ONE /
COEFF	REAL*8	1416		/TWO /
COSA	REAL*8	472		/TWO /
CURRNT	CHAR*10	60		/ONE /
D	REAL*8	2058		
DCOS				INTRINSIC
DEPTH	CHAR*10	40		/ONE /
DSIN				INTRINSIC
E1	REAL*8	786		
F	REAL*8	1962		
F1	REAL*8	2026		
FS	REAL*8	1994		
HEIGHT	REAL*8	24		/ONE /
HOVERD	REAL*8	16		/ONE /
I	INTEGER*4	4130		
IX	INTEGER*4	4034		
IY	INTEGER*4	4078		
J	INTEGER*4	4046		
KY	REAL*8	4082		
N	INTEGER*4	0		/ONE /
NUM	INTEGER*4	4		/ONE /
PI	REAL*8	8		/ONE /
PRESS	REAL*8	4122		
SINA	REAL*8	944		/TWO /
TOL	REAL*8	1888		/TWO /
U	REAL*8	4090		
U0	REAL*8	4018		
U1	REAL*8	2		
UNITA	CHAR*10	4134		
UNITAA	CHAR*10	4174		
UNITAB	CHAR*10	4184		

```
UNITB  CHAR*10      4144
UNITC  CHAR*10     *****
 NITD  CHAR*10      4194
UNITUA CHAR*10      4154
UNITUB CHAR*10      4164
V      REAL*8       4098
VALUE  REAL*8         32   /ONE    /
W      CHAR*10     *****
X      REAL*8       4038
Y      REAL*8       2832   /TWO    /
YINT   REAL*8       4070
YRANGE REAL*8       4054
YSTEP  REAL*8       4062
Z      REAL*8          0   /TWO    /
```

```
CC
      SUBROUTINE SUBPOINT(KY,IX,IY,YSTEP,E1,U0,BOTTOM,U,V,AX,AY,
     1PRESS,F)
CC SUBROUTINE TO COMPUTE VELOCITIES, ACCELERATIONS, PRESSURES, FORCES,
CC   AND MOMENTS FOR ANY POSITION IN SOLUTION FIELD.
CC
      IMPLICIT DOUBLE PRECISION(A-H,K-M,O-Z)
      CHARACTER*10 DEPTH,CASE,CURRNT
      COMMON /ONE/N,NUM,PI,HOVERD,HEIGHT,VALUE,DEPTH,CASE,CURRNT
      COMMON /TWO/Z(59),COSA(59),SINA(59),COEFF(59),SOL(59,2),Y(59)
      DIMENSION E1(49,3),F(4)
      YI=IY-1.
      KY=E1(IX,1)-YI*YSTEP
CC
CC COMPUTE VELOCITIES (U,V), AND PARTIAL DERIVATIVES OF HORIZONTAL
CC   VELOCITY WITH RESPECT TO X AND Y (UX,UY).
CC
      U=U0
      V=0.D0
      UX=0.D0
      UY=0.D0
      IF(DEPTH.EQ.'FINITE')THEN
        CALL VFINITE(U,V,UX,UY,KY)
      ELSE
        CALL VDEEP(U,V,UX,UY,KY)
      ENDIF
CC
CC COMPUTE TOTAL ACCELERATION (AX,AY), PRESSURE, FORCE PER UNIT DEPTH,
CC   (F(1),F(2)) AND MOMENT ABOUT BOTTOM (OR D=L/2) (F(3),F(4)), PER
CC   UNIT DEPTH.
CC UX+VY=0  (CONTINUITY/MASS CONSERVATION)
CC UY-VX=0  (IRROTATIONAL FLOW)
CC
          UC=U-Z(4)
          AX=UC*UX+V*UY
          AY=UC*UY-V*UX
          PRESS=Z(9)-KY-0.5*(UC*UC+V*V)
          F(1)=DSIGN(U*U,U)
          F(2)=AX
          S=KY+BOTTOM
          F(3)=F(1)*S
          F(4)=F(2)*S
      RETURN
```

```
    183         END

Name    Type          Offset P Class

AX      REAL*8            36 *
AY      REAL*8            40 *
BOTTOM  REAL*8            24 *
CASE    CHAR*10           50   /ONE    /
COEFF   REAL*8          1416   /TWO    /
COSA    REAL*8           472   /TWO    /
CURRNT  CHAR*10           60   /ONE    /
DEPTH   CHAR*10           40   /ONE    /
DSIGN                          INTRINSIC
E1      REAL*8            16 *
F       REAL*8            48 *
HEIGHT  REAL*8            24   /ONE    /
HOVERD  REAL*8            16   /ONE    /
IX      INTEGER*4          4 *
IY      INTEGER*4          8 *
KY      REAL*8             0 *
N       INTEGER*4          0   /ONE    /
NUM     INTEGER*4          4   /ONE    /
PI      REAL*8             8   /ONE    /
PRESS   REAL*8            44 *
S       REAL*8          5198
SINA    REAL*8           944   /TWO    /
SOL     REAL*8          1888   /TWO    /
U       REAL*8            28 *
UO      REAL*8            20 *
UC      REAL*8          5190
UX      REAL*8          5174
UY      REAL*8          5182
V       REAL*8            32 *
VALUE   REAL*8            32   /ONE    /
Y       REAL*8          2832   /TWO    /
YI      REAL*8          5166
YSTEP   REAL*8            12 *
Z       REAL*8             0   /TWO    /


    184 CC
    185         SUBROUTINE VDEEP(U,V,UX,UY,KY)
    186 CC SUBROUTINE TO COMPUTE U,V,UX,UY IN DEEP WATER.
    187 CC
    188         IMPLICIT DOUBLE PRECISION(A-H,K-M,O-Z)
    189         CHARACTER*10 DEPTH,CASE,CURRNT
    190         COMMON /ONE/N,NUM,PI,HOVERD,HEIGHT,VALUE,DEPTH,CASE,CURRNT
    191         COMMON /TWO/Z(59),COSA(59),SINA(59),COEFF(59),SOL(59,2),Y(59)
    192         DO 5 J=1,N
1   193           E=J*Z(N+J+10)*DEXP(J*KY)
1   194           DC=E*COSA(J)
1   195           DS=E*SINA(J)
    196           U=U+DC
1   197           V=V+DS
1   198           UX=UX-J*DS
1   199     5     UY=UY+J*DC
    200         RETURN
    201         END
```

```
e   Type          Offset F Class

E   CHAR*10          50   /ONE    /
FF  REAL*8         1416   /TWO    /
A   REAL*8          472   /TWO    /
RNT CHAR*10          60   /ONE    /
    REAL*8         5222
TH  CHAR*10          40   /ONE    /
F                         INTRINSIC
    REAL*8         5230
    REAL*8         5214
GHT REAL*8           24   /ONE    /
ERD REAL*8           16   /ONE    /
    INTEGER*4      5206
    REAL*8           16 *
    INTEGER*4         0   /ONE    /
    INTEGER*4         4   /ONE    /
    REAL*8            8   /ONE    /
A   REAL*8          944   /TWO    /
    REAL*8         1888   /TWO    /
    REAL*8            0 *
    REAL*8            8 *
    REAL*8           12 *
    REAL*8            4 *
UE  REAL*8           32   /ONE    /
    REAL*8         2832   /TWO    /
    REAL*8            0   /TWO    /
```

```
CC
      SUBROUTINE VFINITE(U,V,UX,UY,KY)
CC SUBROUTINE TO COMPUTE U,V,UX,UX IN WATER OF FINITE DEPTH.
CC
      IMPLICIT DOUBLE PRECISION(A-H,K-M,O-Z)
      CHARACTER*10 DEPTH,CASE,CURRNT
      COMMON /ONE/N,NUM,PI,HOVERD,HEIGHT,VALUE,DEPTH,CASE,CURRNT
      COMMON /TWO/Z(59),COSA(59),SINA(59),COEFF(59),SOL(59,2),Y(59)
      DO 4 J=1,N
        E=DEXP(J*(Z(1)+KY))
        S=0.5*(E-1./E)
        C=0.5*(E+1./E)
        B=J*Z(N+J+10)/DCOSH(J*Z(1))
        DC=B*COSA(J)
        DS=B*SINA(J)
        U=U+C*DC
        V=V+S*DS
        UX=UX-J*C*DS
    4   UY=UY+J*S*DC
      RETURN
```

```
e   Type          Offset F Class

    REAL*8         5270
    REAL*8         5262
E   CHAR*10          50   /ONE    /
FF  REAL*8         1416   /TWO    /
A   REAL*8          472   /TWO    /
```

```
CURRNT CHAR*10          60    /ONE    /
DC     REAL*8         5278
DCOSH                        INTRINSIC
DEPTH  CHAR*10          40    /ONE    /
DEXP                         INTRINSIC
DS     REAL*8         5286
E      REAL*8         5246
HEIGHT REAL*8           24    /ONE    /
HOVERD REAL*8           16    /ONE    /
J      INTEGER*4      5238
KY     REAL*8           16 *
N      INTEGER*4         0    /ONE    /
NUM    INTEGER*4         4    /ONE    /
PI     REAL*8            8    /ONE    /
S      REAL*8         5254
SINA   REAL*8          944    /TWO    /
SOL    REAL*8         1888    /TWO    /
U      REAL*8            0 *
UX     REAL*8            8 *
UY     REAL*8           12 *
V      REAL*8            4 *
VALUE  REAL*8           32    /ONE    /
Y      REAL*8         2832    /TWO    /
Z      REAL*8            0    /TWO    /


    223 CC
    224 CC SUBROUTINE TO COMPUTE DEPTH-INTEGRATED VALUES OF FORCE AND MOMENT
    225 CC   ABOUT THE BOTTOM USING THE TRAPEZOID RULE.
    226 CC
    227        SUBROUTINE INTEG(F,F1,FS,YINT)
    228        IMPLICIT DOUBLE PRECISION(F,Y)
    229        DIMENSION F(4),FS(4),F1(4)
    230        DO 8 I=1,4
1   231          FS(I)=FS(I)+(F(I)+F1(I))*YINT
1   232    8     F1(I)=F(I)
    233        RETURN
    234        END

Name   Type         Offset P Class

F      REAL*8            0 *
F1     REAL*8            4 *
FS     REAL*8            8 *
I      INTEGER*4      5294
YINT   REAL*8           12 *


Name   Type           Size   Class

INTEG                        SUBROUTINE
ONE                     70   COMMON
LOTTE                        SUBROUTINE
POINTN                       SUBROUTINE
SUBPOI                       SUBROUTINE
TWO                   3304   COMMON
VDEEP                        SUBROUTINE
VFINIT                       SUBROUTINE
```

VECTOR FILE | FILE: DEAN'S CASE 2C

```
D Line# 1      7                    IBM Personal Computer FORTRAN Compiler V2.00
 Pass One     No Errors Detected
             234 Source Lines
```

```
      SUBROUTINE PLOTTER(A,D,UNITA,UNITB,UNITC,UNITD,NPLOT)
CC SUBROUTINE TO PROVIDE A ONE-PAGE PLOT OF DATA, USING A 132-COLUMN
CC PRINTER.  CONDENSED MODE ON 8 1/2 INCH PAPER IS RECOMMENDED.
CC
CC ROUTINE WILL PLOT UP TO THREE ORDINATES A(49,1),A(49,2),A(49,3)
CC VS. AN ABCISSA D(49,3). IF FEWER THAN THREE ORDINATES ARE PLOTTED,
CC THE EXTRA VARIBLE MAY BE USED AS AN ALTERNATE DESCRIPTION OF THE
CC ABCISSA (E.G. DISTANCE, TIME AND ANGLE), OR MAY BE USED TO DISPLAY
CC OTHER UNPLOTTED DATA.
CC
CC NPLOT IS THE NUMBER OF ORDINATES TO BE PLOTTED, UP TO A MAX. OF 3.
CC UNITA, UNITB, UNITC, AND UNITD ARE THE RESPECTIVE UNITS
CC
CC MAIN PROGRAM MUST LEAD IN WITH A 132 COLUMN TITLE LINE, SPACED DOWN
CC SIX LINES.  LAST 4X8 COLUMNS SHOULD BE DATA TITLES.
CC
      IMPLICIT DOUBLE PRECISION(A-H,K-L,O-Z)
      CHARACTER*1 SPACE(100),BORDER(100),SAVE
      CHARACTER*8 UNITA,UNITB,UNITC,UNITD
      CHARACTER*10 DEPTH,CASE,CURRNT
      COMMON /ONE/N,NUM,PI,HOVERD,HEIGHT,VALUE,DEPTH,CASE,CURRNT
      DIMENSION A(49,3),D(49,3)
CC
CC SET PLOTTING ARRAY TO ALL SPACES, BORDER TO ALL DASHES
CC
      DATA SPACE/'|',98*' ','|'/
      DATA BORDER/'|',98*'-','|'/
      WRITE(7,20)HOVERD,HEIGHT,CASE,VALUE,CURRNT,UNITA,UNITB,UNITC
     1,UNITD
CC
CC FIND MAXIMA AND MINIMA
CC
      AMAX=A(1,49)
      AMIN=A(1,1)
      DO 1 J=1,NPLOT
        DO 2 I=1,49
          IF(A(I,J).GT.AMAX)AMAX=A(I,J)
    2     IF(A(I,J).LT.AMIN)AMIN=A(I,J)
    1 CONTINUE
CC
CC ESTABLISH Y=0 AXIS.
CC
      ARANGE=AMAX-AMIN
      NZERO=DINT(99.*AMAX/ARANGE+1.5)
      SAVE=SPACE(NZERO)
      SPACE(NZERO)='|'
CC
CC PLOT DATA
CC
      I=49
      CALL SUBPLOT(BORDER,NPLOT,I,A,D,AMAX,ARANGE)
      DO 3 I=48,2,-1
    3   CALL SUBPLOT(SPACE,NPLOT,I,A,D,AMAX,ARANGE)
      I=1
      CALL SUBPLOT(BORDER,NPLOT,I,A,D,AMAX,ARANGE)
      WRITE(7,21)AMAX,AMIN
      SPACE(NZERO)=SAVE
   20 FORMAT('H/d=',F5.4,' HEIGHT=',1PG10.4,', DIMENSIONLESS ',
     1'W/RESP. TO ',A10,', CURRENT=',F7.4,', CRITER., ',5A8)
```

VECTOR FILE | FILE: DEAN'S CASE 2C

```
     60   21  FORMAT(F6.5,89X,F8.5,///////)
     61       RETURN
     62       END
```

Name	Type	Offset	P	Class
A	REAL*8	0	*	
AMAX	REAL*8	202		
AMIN	REAL*8	210		
ARANGE	REAL*8	230		
BORDER	CHAR*1	102		
CASE	CHAR*10	50		/ONE /
CURRNT	CHAR*10	60		/ONE /
D	REAL*8	4	*	
DEPTH	CHAR*10	40		/ONE /
DINT				INTRINSIC
HEIGHT	REAL*8	24		/ONE /
HOVERD	REAL*8	16		/ONE /
I	INTEGER*4	226		
J	INTEGER*4	218		
N	INTEGER*4	0		/ONE /
NPLOT	INTEGER*4	24	*	
NUM	INTEGER*4	4		/ONE /
NZERO	INTEGER*4	238		
PI	REAL*8	8		/ONE /
SAVE	CHAR*1	242		
SPACE	CHAR*1	2		
UNITA	CHAR*8	8	*	
UNITB	CHAR*8	12	*	
UNITC	CHAR*8	16	*	
UNITD	CHAR*8	20	*	
VALUE	REAL*8	32		/ONE /

```
     63 CC
     64       SUBROUTINE SUBPLOT(SPACE,NPLOT,I,A,D,AMAX,ARANGE)
     65 CC SUBROUTINE TO POSITION PLOTTING POINTS.
     66 CC
     67 CC USE WITH SUBROUTINE PLOTTER.
     68 CC
     69       IMPLICIT DOUBLE PRECISION(A,D)
     70       CHARACTER*1 SPACE(100),SAVE(100),O(3)
     71       DIMENSION A(49,3),D(49,3)
     72       DO 1 J=1,100
1    73     1   SAVE(J)=SPACE(J)
     74       O(1)='+'
     75       O(2)='o'
     76       O(3)='x'
     77       DO 2 J=1,NPLOT
1    78         NSPACE=DINT(99.*(AMAX-A(I,J))/ARANGE+1.5)
1    79     2   SPACE(NSPACE)=O(J)
     80       WRITE(7,20)SPACE,(A(I,J),J=1,NPLOT),(D(I,J),J=4-NPLOT,1,-1)
     81       DO 3 J=1,100
     82     3   SPACE(J)=SAVE(J)
     83    20 FORMAT(100A1,3F8.5,F8.2)
     84       RETURN
     85       END
```

Name	Type	Offset	P	Class
A	REAL*8	12	*	
AMAX	REAL*8	20	*	
ARANGE	REAL*8	24	*	
D	REAL*8	16	*	
DINT				INTRINSIC
I	INTEGER*4	8	*	
J	INTEGER*4	488		
NPLOT	INTEGER*4	4	*	
NSPACE	INTEGER*4	496		
O	CHAR*1	484		
SAVE	CHAR*1	384		
SPACE	CHAR*1	0	*	

Name	Type	Size	Class
ONE		70	COMMON
PLOTTE			SUBROUTINE
SUBPLO			SUBROUTINE

Pass One No Errors Detected
85 Source Lines

2. SAMPLE SOL'N
VECTOR FILE

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

DEPTH: FINITE, HEIGHT/DEPTH .5821

WAVE HEIGHT .000926, DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION EULER , MAGNITUDE .00

HEIGHT STEP 1 OF 4

*INITIAL LINEAR SOLUTION
.253330E+00 .368658E-01 .126158E+02 .498042E+00 .000000E+00 .000000E+00
.498042E+00 .000000E+00 .124023E+00 .184329E-01
.181529E-01 .173213E-01 .159634E-01 .141204E-01 .118484E-01 .921645E-02
.630442E-02 .320084E-02 .112915E-17 -.320084E-02
-.630442E-02 -.921645E-02 -.118484E-01 -.141204E-01 -.159634E-01 -.173213E-01
.181529E-01 -.184329E-01 .370107E-01 .000000E+00
.000000E+00 .000000E+00 .000000E+00 .000000E+00 .000000E+00 .000000E+00
.000000E+00 .000000E+00 .000000E+00 .000000E+00
.000000E+00 .000000E+00 .000000E+00 .000000E+00 .000000E+00 .000000E+00

ITERATION 1

SOLUTION VECTOR
.244047E+00 .355149E-01 .123863E+02 .507101E+00 .000000E+00 -.618296E-03
.507101E+00 -.156633E-03 .128413E+00 .351539E-01
.310890E-01 .203821E-01 .674987E-02 -.562338E-02 -.137964E-01 -.168710E-01
.157231E-01 -.121187E-01 -.781879E-02 -.404822E-02
-.137613E-02 .140197E-03 .729479E-03 .715827E-03 .403288E-03 .266768E-04
.257145E-03 -.360977E-03 .997840E-02 .125960E-01
.799552E-02 .247389E-02 .488430E-03 .688651E-04 .749700E-05 .696788E-06
.538069E-07 .668004E-08 .202548E-09 .295093E-09
-.121294E-10 .225214E-10 -.150290E-11 .311853E-12 -.149384E-12 .529469E-12

ITERATION 2

SOLUTION VECTOR
.245405E+00 .357126E-01 .124173E+02 .505999E+00 .263745E-18 .533924E-03
.505999E+00 .129439E-03 .128141E+00 .286298E-01
.263429E-01 .202977E-01 .124899E-01 .507872E-02 -.488104E-03 -.379162E-02
.524965E-02 -.566173E-02 -.575431E-02 -.592508E-02
-.624239E-02 -.660223E-02 -.688971E-02 -.705592E-02 -.711568E-02 -.711337E-02
.709286E-02 -.708281E-02 .243250E-01 .827602E-02
.343748E-02 .127906E-02 .288456E-03 .368389E-04 .555181E-05 .183530E-05
.645717E-06 .257238E-06 .919371E-07 .114665E-07
-.117932E-07 -.105491E-07 -.478328E-08 -.106319E-08 .383611E-09 .331366E-09

ITERATION 3

SOLUTION VECTOR
.245851E+00 .357774E-01 .124286E+02 .505540E+00 .214325E-18 .104139E-02
.505540E+00 .255796E-03 .128012E+00 .274901E-01
.254592E-01 .202526E-01 .137597E-01 .760725E-02 .262875E-02 -.101277E-02
.351945E-02 -.519779E-02 -.631110E-02 -.704287E-02
-.751685E-02 -.781972E-02 -.801179E-02 -.813309E-02 -.820898E-02 -.825489E-02
.827957E-02 -.828736E-02 .270162E-01 .783953E-02
.252496E-02 .822244E-03 .260507E-03 .775846E-04 .221941E-04 .646539E-05
.188207E-05 .473653E-06 .899352E-07 .111249E-07

FILE: DEAN'S CASE 20

```
 -.136115E-09 -.465720E-09 -.130949E-09 -.599229E-10 -.111887E-09 -.597357E-10


ITERATION    4

SOLUTION VECTOR
  .245849E+00  .357771E-01  .124286E+02  .505541E+00  .224993E-20  .106466E-02
.505541E+00  .261746E-03  .128018E+00  .273998E-01
  .253971E-01  .202642E-01  .138671E-01  .779728E-02  .284605E-02 -.838123E-03
.342606E-02 -.517880E-02 -.633858E-02 -.709460E-02
 -.758261E-02 -.789542E-02 -.809468E-02 -.822052E-02 -.829865E-02 -.834516E-02
.836970E-02 -.837735E-02  .272138E-01  .780618E-02
  .246840E-02  .790881E-03  .251825E-03  .786229E-04  .237609E-04  .684641E-05
.183966E-05  .441631E-06  .845792E-07  .677050E-08
 -.453752E-08 -.347067E-08 -.165953E-08 -.656253E-09 -.241920E-09 -.661627E-10


ITERATION    5

SOLUTION VECTOR
  .245849E+00  .357771E-01  .124286E+02  .505541E+00 -.551484E-21  .106478E-02
.505541E+00  .261773E-03  .128018E+00  .273995E-01
  .253969E-01  .202643E-01  .138675E-01  .779797E-02  .284681E-02 -.837584E-03
.342584E-02 -.517882E-02 -.633873E-02 -.709482E-02
 -.758285E-02 -.789567E-02 -.809493E-02 -.822078E-02 -.829891E-02 -.834543E-02
.836996E-02 -.837761E-02  .272144E-01  .780611E-02
  .246822E-02  .790766E-03  .251790E-03  .786266E-04  .237687E-04  .685025E-05
.184025E-05  .441523E-06  .845420E-07  .678625E-08
 -.453651E-08 -.348559E-08 -.166361E-08 -.656418E-09 -.241849E-09 -.665299E-10


HEIGHT STEP  2 OF  4


ITERATION    1

SOLUTION VECTOR
  .236128E+00  .687250E-01  .121809E+02  .515809E+00  .184997E-18  .245397E-02
.515809E+00  .580076E-03  .133497E+00  .588211E-01
  .489600E-01  .285951E-01  .111612E-01  .792344E-03 -.433358E-02 -.671459E-02
.788193E-02 -.853964E-02 -.896527E-02 -.926273E-02
 -.947518E-02 -.962605E-02 -.973155E-02 -.980388E-02 -.985200E-02 -.988220E-02
.989864E-02 -.990383E-02  .358043E-01  .139753E-01
  .679215E-02  .344099E-02  .169816E-02  .795083E-03  .349853E-03  .144217E-03
.554974E-04  .198603E-04  .655411E-05  .197139E-05
  .529879E-06  .125825E-06  .265935E-07  .781747E-08  .477835E-08  .231067E-08


ITERATION    2

SOLUTION VECTOR
  .234885E+00  .683633E-01  .121486E+02  .517192E+00  .145425E-18  .321741E-02
.517192E+00  .756697E-03  .134370E+00  .573383E-01
  .491247E-01  .318247E-01  .157466E-01  .454622E-02 -.229962E-02 -.623746E-02
.843773E-02 -.964650E-02 -.103018E-01 -.106524E-01
 -.108374E-01 -.109334E-01 -.109822E-01 -.110061E-01 -.110174E-01 -.110224E-01
.110244E-01 -.110250E-01  .396744E-01  .147780E-01
  .642710E-02  .288787E-02  .129982E-02  .575670E-03  .247231E-03  .101561E-03
.393251E-04  .140064E-04  .436656E-05  .101604E-05
  .231631E-07 -.174405E-06 -.148975E-06 -.902723E-07 -.495812E-07 -.175511E-07


ITERATION    3

SOLUTION VECTOR
  .234899E+00  .683674E-01  .121487E+02  .517189E+00 -.913155E-21  .325704E-02
```

.491097E-01 .318701E-01 .158365E-01 .459124E-02 -.231843E-02 -.628400E-02
.847870E-02 -.966992E-02 -.103098E-01 -.106516E-01
-.108337E-01 -.109305E-01 -.109818E-01 -.110091E-01 -.110234E-01 -.110308E-01
.110343E-01 -.110353E-01 .396925E-01 .147906E-01
.643661E-02 .288406E-02 .129185E-02 .570272E-03 .245248E-03 .101498E-03
.397720E-04 .143646E-04 .451707E-05 .103374E-05
-.131733E-07 -.218858E-06 -.186025E-06 -.118221E-06 -.713880E-07 -.270874E-07

HEIGHT STEP 3 OF 4

ITERATION 1

SOLUTION VECTOR
.224992E+00 .982257E-01 .118897E+02 .528457E+00 -.361048E-19 .561740E-02
.528457E+00 .126386E-02 .140588E+00 .859877E-01
.656794E-01 .338681E-01 .120476E-01 -.129371E-03 -.640161E-02 -.949964E-02
.109871E-01 -.116844E-01 -.120032E-01 -.121445E-01
-.122044E-01 -.122279E-01 -.122359E-01 -.122378E-01 -.122380E-01 -.122380E-01
.122380E-01 -.122381E-01 .455920E-01 .187399E-01
.928620E-02 .482074E-02 .253606E-02 .133120E-02 .689683E-03 .348941E-03
.170606E-03 .796371E-04 .349307E-04 .140540E-04
.495467E-05 .136722E-05 .163241E-06 -.125842E-06 -.139816E-06 -.601869E-07

ITERATION 2

SOLUTION VECTOR
.224548E+00 .980321E-01 .118781E+02 .528972E+00 .346754E-20 .580731E-02
.528972E+00 .130413E-02 .140895E+00 .856801E-01
.661640E-01 .346331E-01 .123290E-01 -.175110E-03 -.652881E-02 -.960922E-02
.110695E-01 -.117544E-01 -.120741E-01 -.122230E-01
-.122923E-01 -.123245E-01 -.123396E-01 -.123466E-01 -.123498E-01 -.123512E-01
.123519E-01 -.123520E-01 .459671E-01 .188719E-01
.934978E-02 .484039E-02 .252461E-02 .130622E-02 .663549E-03 .327909E-03
.156001E-03 .704376E-04 .294789E-04 .108910E-04
.308329E-05 .191066E-06 -.636847E-06 -.717579E-06 -.616856E-06 -.273602E-06

ITERATION 3

SOLUTION VECTOR
.224552E+00 .980337E-01 .118781E+02 .528971E+00 -.496825E-22 .580817E-02
.528971E+00 .130424E-02 .140893E+00 .856819E-01
.661629E-01 .346329E-01 .123281E-01 -.175446E-03 -.652859E-02 -.960892E-02
.110694E-01 -.117544E-01 -.120742E-01 -.122230E-01
-.122923E-01 -.123245E-01 -.123395E-01 -.123464E-01 -.123496E-01 -.123511E-01
.123517E-01 -.123519E-01 .459661E-01 .188715E-01
.934962E-02 .484034E-02 .252468E-02 .130630E-02 .663622E-03 .327958E-03
.156036E-03 .704630E-04 .294986E-04 .109063E-04
.309386E-05 .197438E-06 -.634092E-06 -.717271E-06 -.617960E-06 -.274351E-06

HEIGHT STEP 4 OF 4

ITERATION 1

SOLUTION VECTOR
.215820E+00 .125629E+00 .116448E+02 .539567E+00 .671009E-19 .808305E-02
.539567E+00 .174519E-02 .146761E+00 .112861E+00
.741632E-01 .314608E-01 .764112E-02 -.382606E-02 -.896171E-02 -.111771E-01
.121125E-01 -.125018E-01 -.126615E-01 -.127261E-01
-.127515E-01 -.127613E-01 -.127647E-01 -.127660E-01 -.127665E-01 -.127671E-01

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  .110382E-01  .621050E-02  .355517E-02  .203862E-02  .116148E-02  .653421E-03
.361229E-03  .195287E-03  .102776E-03  .524012E-04
  .257668E-04  .121809E-04  .554675E-05  .248695E-05  .120869E-05  .422835E-06


ITERATION   2

SOLUTION VECTOR
  .215468E+00  .125424E+00  .116354E+02  .540003E+00  .481750E-20  .823581E-02
.540003E+00  .177463E-02  .147024E+00  .112604E+00
  .748945E-01  .317097E-01  .756118E-02 -.393435E-02 -.903316E-02 -.112223E-01
.121490E-01 -.125387E-01 -.127023E-01 -.127708E-01
 -.127996E-01 -.128116E-01 -.128167E-01 -.128188E-01 -.128197E-01 -.128200E-01
.128201E-01 -.128201E-01  .482700E-01  .208422E-01
  .110916E-01  .624586E-02  .357380E-02  .204429E-02  .115839E-02  .645956E-03
.352447E-03  .187083E-03  .959714E-04  .471692E-04
  .219287E-04  .943210E-05  .357946E-05  .103539E-05  .590763E-07 -.874714E-07


ITERATION   3

SOLUTION VECTOR
  .215471E+00  .125426E+00  .116355E+02  .540002E+00  .167969E-21  .823632E-02
.540002E+00  .177469E-02  .147022E+00  .112605E+00
  .748933E-01  .317093E-01  .756168E-02 -.393362E-02 -.903265E-02 -.112221E-01
.121489E-01 -.125388E-01 -.127024E-01 -.127710E-01
 -.127997E-01 -.128117E-01 -.128168E-01 -.128189E-01 -.128198E-01 -.128201E-01
.128203E-01 -.128203E-01  .482697E-01  .208419E-01
  .110913E-01  .624562E-02  .357367E-02  .204423E-02  .115839E-02  .645969E-03
.352470E-03  .187108E-03  .959971E-04  .471936E-04
  .219518E-04  .945373E-05  .359948E-05  .105381E-05  .760316E-07 -.795459E-07


ITERATION   4

SOLUTION VECTOR
  .215471E+00  .125426E+00  .116355E+02  .540002E+00 -.167976E-21  .823632E-02
.540002E+00  .177469E-02  .147022E+00  .112605E+00
  .748934E-01  .317093E-01  .756168E-02 -.393362E-02 -.903265E-02 -.112221E-01
.121489E-01 -.125388E-01 -.127024E-01 -.127710E-01
 -.127997E-01 -.128117E-01 -.128168E-01 -.128189E-01 -.128198E-01 -.128201E-01
.128203E-01 -.128203E-01  .482697E-01  .208419E-01
  .110913E-01  .624562E-02  .357368E-02  .204423E-02  .115838E-02  .645968E-03
.352470E-03  .187108E-03  .959970E-04  .471936E-04
  .219517E-04  .945369E-05  .359946E-05  .105379E-05  .760152E-07 -.795533E-07


*SOLUTION, NON-DIMENSIONALIZED BY WAVENUMBER

*WATER DEPTH                                .215471

*WAVE HEIGHT                                .125426

*WAVE PERIOD                              11.635485

*WAVE SPEED                                 .540002

*MEAN EULERIAN FLUID SPEED                  .000000

*MEAN MASS TRANSPORT SPEED                  .008236

*MEAN FLUID SPEED RELATIVE TO WAVE          .540002

*VOLUME FLUX DUE TO WAVES                   .001775
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*SURFACE ELEVATIONS - CREST TO TROUGH

.1126 .0749 .0317 .0076 -.0039 -.0090 -.0112 -.0121 -.0125 -.0127 -.0128 -
0128 -.0128 -.0128 -.0128 -.0128 -.0128 -.0128 -.0128
-.0128

*FOURIER COEFFICIENTS

1	.048270	2	.020842	3	.011091	4	.006246	5	.003574
6	.002044	7	.001158	8	.000646	9	.000352	10	.000187
11	.000096	12	.000047	13	.000022	14	.000009	15	.000004
16	.000001	17	.000000	18	.000000				

*INTEGRAL QUANTITIES

*IMPULSE .177469E-02

*KINETIC ENERGY (T) .479168E-03

*POTENTIAL ENERGY (V) .419326E-03

*MEAN SQUARE OF BED VELOCITY .244220E-02

*RADIATION STRESS (SXX) .118492E-02

*WAVE POWER (F) .467629E-03

*INVARIANTS FOR FINITE DEPTH

*VOLUME FLUX (Q) .114580

*BERNOULLI CONSTANT (R) .362493

*MOMENTUM FLUX (S) .085314

3. LOCAL VARIABLE OUTPUT
FILE: DEAN'S CASE 2C

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

PTH: FINITE, HEIGHT/DEPTH= .5851

WAVE HEIGHT 4.65528E-04,DIMENSIONLESS WITH RESPECT TO PERIDD

CURRENT CRITERION: EULER , MAGNITUDE= .00

SOLUTION, NON-DIMENSIDNALIZED BY WAVENUMBER

WATER DEPTH	.16466
WAVE HEIGHT	9.63417E-02
WAVE PERIOD	14.386
WAVE SPEED	.43676
MEAN EULERIAN FLUID SPEED	.00000
MEAN MASS TRANSPORT SPEED	1.23417E-02
MEAN FLUID SPEED RELATIVE TO WAVE	.43676
VOLUME FLUX DUE TO WAVES	2.03218E-03
BERNOULLI CONSTANT	9.67366E-02

SOLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
	23512			-.25662									
.07675	.23681	.00000	.00000	-.28933	.00000	.0560776	.0000000	.0135374	.0000000	.0000000	.0000000	.0000000	.0000000
.06669	.22296	.00000	.00000	-.27983	.00719	.0497113	.0000000	.0115005	.0000000	.0005320	.0000000	.0001259	.0000000
.05663	.21043	.00000	.00000	-.26817	.01449	.0442809	.0000000	.0097988	.0000000	.0010048	.0000000	.0002330	.0000000
.04657	.19908	.00000	.00000	-.25510	.02192	.0396341	.0000000	.0083719	.0000000	.0014268	.0000000	.0003244	.0000000
.03651	.18880	.00000	.00000	-.24119	.02948	.0356461	.0000000	.0071710	.0000000	.0018054	.0000000	.0004026	.0000000
.02645	.17948	.00000	.00000	-.22683	.03719	.0322143	.0000000	.0061565	.0000000	.0021467	.0000000	.0004696	.0000000
.01639	.17104	.00000	.00000	-.21231	.04504	.0292539	.0000000	.0052965	.0000000	.0024558	.0000000	.0005272	.0000000
.00634	.16339	.00000	.00000	-.19785	.05303	.0266948	.0000000	.0045647	.0000000	.0027372	.0000000	.0005768	.0000000
-.00372	.15646	.00000	.00000	-.18359	.06117	.0244788	.0000000	.0039395	.0000000	.0029946	.0000000	.0006196	.0000000
-.01378	.15019	.00000	.00000	-.16962	.06946	.0225573	.0000000	.0034034	.0000000	.0032311	.0000000	.0006565	.0000000
-.02384	.14453	.00000	.00000	-.15601	.07788	.0208898	.0000000	.0029417	.0000000	.0034496	.0000000	.0006884	.0000000
-.03390	.13944	.00000	.00000	-.14279	.08643	.0194424	.0000000	.0025423	.0000000	.0036525	.0000000	.0007160	.0000000
-.04396	.13486	.00000	.00000	-.12998	.09512	.0181868	.0000000	.0021952	.0000000	.0038417	.0000000	.0007398	.0000000
-.05402	.13076	.00000	.00000	-.11757	.10393	.0170991	.0000000	.0018919	.0000000	.0040192	.0000000	.0007604	.0000000
-.06407	.12712	.00000	.00000	-.10554	.11287	.0161593	.0000000	.0016254	.0000000	.0041864	.0000000	.0007781	.0000000
-.07413	.12390	.00000	.00000	-.09389	.12193	.0153507	.0000000	.0013896	.0000000	.0043449	.0000000	.0007932	.0000000
-.08419	.12108	.00000	.00000	-.08257	.13110	.0146592	.0000000	.0011796	.0000000	.0044958	.0000000	.0008062	.0000000
-.09425	.11863	.00000	.00000	-.07156	.14038	.0140731	.0000000	.0009909	.0000000	.0046403	.0000000	.0008171	.0000000
-.10431	.11654	.00000	.00000	-.06082	.14977	.0135827	.0000000	.0008197	.0000000	.0047794	.0000000	.0008262	.0000000
-.11437	.11480	.00000	.00000	-.05032	.15927	.0131801	.0000000	.0006629	.0000000	.0049140	.0000000	.0008336	.0000000
-.12443	.11340	.00000	.00000	-.04001	.16888	.0128589	.0000000	.0005174	.0000000	.0050450	.0000000	.0008396	.0000000
-.13448	.11231	.00000	.00000	-.02987	.17859	.0126141	.0000000	.0003806	.0000000	.0051731	.0000000	.0008441	.0000000
-.14454	.11154	.00000	.00000	-.01985	.18839	.0124419	.0000000	.0002503	.0000000	.0052991	.0000000	.0008473	.0000000
-.15460	.11108	.00000	.00000	-.00990	.19830	.0123396	.0000000	.0001241	.0000000	.0054237	.0000000	.0008492	.0000000
-.16466	.11093	.00000	.00000	.00000	.20831	.0123056	.0000000	.0000000	.0000000	.0055477	.0000000	.0008498	.0000000

OLUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.00857	.02475	.07474	.20495	.12985	.00049	.0006124	.2049525	.0001061	.0355036	.0000000	.0000000	.0000000	.0000000
.00135	.02624	.07091	.20129	.11844	.00861	.0006888	.2012904	.0001143	.0334164	.0000047	.0014661	.0000008	.0002487
-.00587	.02761	.06717	.19760	.10794	.01664	.0007621	.1976046	.0001210	.0313782	.0000099	.0029057	.0000016	.0004826
-.01308	.02884	.06351	.19393	.09829	.02460	.0008319	.1939334	.0001261	.0293955	.0000157	.0043187	.0000025	.0007019
-.02030	.02996	.05994	.19031	.09942	.03250	.0008978	.1903093	.0001296	.0274725	.0000219	.0057054	.0000035	.0009071
-.02752	.03098	.05645	.18676	.08125	.04033	.0009596	.1867598	.0001316	.0256121	.0000286	.0070662	.0000044	.0010987
-.03474	.03189	.05303	.18331	.07374	.04811	.0010173	.1833085	.0001322	.0238157	.0000358	.0084018	.0000054	.0012771
-.04196	.03272	.04968	.17998	.06681	.05583	.0010708	.1799753	.0001314	.0220836	.0000433	.0097129	.0000063	.0014427
-.04917	.03347	.04640	.17678	.06043	.06351	.0011202	.1767769	.0001294	.0204152	.0000512	.0110003	.0000072	.0015961
-.05639	.03414	.04319	.17373	.05454	.07114	.0011656	.1737274	.0001262	.0188091	.0000595	.0122653	.0000082	.0017377
-.06361	.03474	.04003	.17084	.04909	.07873	.0012071	.1708385	.0001220	.0172632	.0000680	.0135088	.0000091	.0018678
-.07083	.03528	.03694	.16812	.04404	.08629	.0012449	.1681203	.0001168	.0157751	.0000769	.0147321	.0000099	.0019871
-.07804	.03576	.03389	.16558	.03936	.09381	.0012791	.1655809	.0001108	.0143417	.0000860	.0159364	.0000107	.0020958
-.08526	.03619	.03090	.16323	.03501	.10129	.0013098	.1632270	.0001040	.0129596	.0000953	.0171230	.0000115	.0021943
-.09248	.03657	.02795	.16106	.03095	.10875	.0013373	.1610641	.0000965	.0116254	.0001049	.0182934	.0000122	.0022830
-.09970	.03690	.02504	.15910	.02715	.11618	.0013616	.1590970	.0000885	.0103351	.0001146	.0194488	.0000129	.0023623
-.10692	.03719	.02217	.15733	.02358	.12358	.0013830	.1573292	.0000799	.0090846	.0001245	.0205908	.0000135	.0024324
-.11413	.03744	.01932	.15576	.02021	.13095	.0014015	.1557638	.0000708	.0078700	.0001346	.0217207	.0000141	.0024936
-.12135	.03765	.01651	.15440	.01701	.13831	.0014172	.1544031	.0000614	.0066868	.0001447	.0228401	.0000145	.0025461
-.12857	.03782	.01372	.15325	.01396	.14563	.0014304	.1532490	.0000516	.0055306	.0001550	.0239504	.0000149	.0025902
-.13579	.03796	.01095	.15230	.01103	.15294	.0014410	.1523030	.0000416	.0043972	.0001654	.0250531	.0000153	.0026260
-.14301	.03807	.00820	.15157	.00819	.16023	.0014492	.1515661	.0000314	.0032819	.0001758	.0261497	.0000155	.0026537
-.15022	.03814	.00546	.15104	.00542	.16750	.0014550	.1510393	.0000210	.0021804	.0001863	.0272418	.0000157	.0026734
-.15744	.03819	.00273	.15072	.00270	.17474	.0014585	.1507229	.0000105	.0010879	.0001968	.0283308	.0000159	.0026852
-.16466	.03820	.00000	.15062	.00000	.18197	.0014596	.1506175	.0000000	.0000000	.0002073	.0294184	.0000159	.0026892

OLUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
	0.05387		.03716										
-.01546	-.03571	.01651	.03681	.05199	.00045	-.0012755	.0368062	-.0001903	.0054913	.0000000	.0000000	.0000000	.0000000
-.02168	-.03506	.01599	.03864	.05003	.00698	-.0012292	.0386425	-.0001758	.0055251	-.0000078	.0002345	-.0000011	.0000342
-.02790	-.03443	.01545	.04038	.04804	.01350	-.0011855	.0403815	-.0001621	.0055227	-.0000153	.0004801	-.0000022	.0000686
-.03411	-.03383	.01488	.04203	.04601	.02001	-.0011444	.0420253	-.0001494	.0054863	-.0000225	.0007363	-.0000032	.0001028
-.04033	-.03325	.01430	.04358	.04396	.02651	-.0011057	.0435759	-.0001375	.0054178	-.0000295	.0010023	-.0000040	.0001367
-.04655	-.03270	.01370	.04504	.04187	.03299	-.0010694	.0450354	-.0001263	.0053193	-.0000363	.0012778	-.0000049	.0001701
-.05276	-.03218	.01308	.04641	.03977	.03946	-.0010355	.0464059	-.0001159	.0051927	-.0000428	.0015620	-.0000056	.0002027
-.05898	-.03168	.01244	.04769	.03764	.04592	-.0010038	.0476892	-.0001061	.0050398	-.0000492	.0018545	-.0000063	.0002345
-.06520	-.03121	.01179	.04889	.03550	.05236	-.0009743	.0488874	-.0000969	.0048625	-.0000553	.0021547	-.0000069	.0002653
-.07141	-.03077	.01112	.05000	.03334	.05879	-.0009470	.0500024	-.0000883	.0046626	-.0000613	.0024620	-.0000075	.0002949
-.07763	-.03036	.01044	.05104	.03116	.06521	-.0009217	.0510360	-.0000802	.0044417	-.0000671	.0027761	-.0000080	.0003232
-.08384	-.02997	.00974	.05199	.02898	.07161	-.0008985	.0519901	-.0000726	.0042015	-.0000728	.0030963	-.0000085	.0003501
-.09006	-.02962	.00904	.05287	.02678	.07800	-.0008772	.0528663	-.0000654	.0039437	-.0000783	.0034222	-.0000089	.0003754
-.09628	-.02929	.00832	.05367	.02457	.08438	-.0008578	.0536662	-.0000587	.0036698	-.0000837	.0037534	-.0000093	.0003991
-.10249	-.02899	.00759	.05439	.02236	.09074	-.0008403	.0543913	-.0000522	.0033812	-.0000889	.0040892	-.0000097	.0004210
-.10871	-.02872	.00686	.05504	.02014	.09709	-.0008246	.0550430	-.0000461	.0030796	-.0000941	.0044294	-.0000100	.0004411
-.11493	-.02847	.00612	.05562	.01791	.10342	-.0008106	.0556226	-.0000403	.0027662	-.0000992	.0047734	-.0000103	.0004592
-.12114	-.02826	.00537	.05613	.01568	.10974	-.0007984	.0561312	-.0000347	.0024426	-.0001042	.0051207	-.0000105	.0004754
-.12736	-.02807	.00461	.05657	.01345	.11605	-.0007879	.0565698	-.0000294	.0021100	-.0001091	.0054710	-.0000107	.0004896
-.13358	-.02791	.00385	.05694	.01121	.12234	-.0007791	.0569395	-.0000242	.0017698	-.0001140	.0058238	-.0000108	.0005016
-.13979	-.02778	.00309	.05724	.00897	.12862	-.0007719	.0572408	-.0000192	.0014233	-.0001188	.0061787	-.0000110	.0005116
-.14601	-.02768	.00232	.05747	.00673	.13489	-.0007663	.0574746	-.0000143	.0010719	-.0001236	.0065353	-.0000111	.0005193
-.15223	-.02761	.00155	.05764	.00449	.14114	-.0007623	.0576411	-.0000095	.0007167	-.0001284	.0068931	-.0000112	.0005249
-.15844	-.02757	.00077	.05774	.00224	.14738	-.0007599	.0577410	-.0000047	.0003589	-.0001331	.0072517	-.0000112	.0005282
-.16466	-.02755	.00000	.05777	.00000	.15360	-.0007591	.0577742	.0000000	.0000000	-.0001378	.0076108	-.0000112	.0005293

WATER SURFACE ELEVATION

H/d=.5851 HEIGHT=4.6553E-04, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .00000, CRITER., EULER

ELEV.VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.01960	7.19290	3.14159	180.00
-.01944	7.04305	3.07614	176.25
-.01935	6.89320	3.01069	172.50
-.01936	6.74335	2.94524	168.75
-.01863	6.59349	2.87979	165.00
-.01713	6.44364	2.81434	161.25
-.01599	6.29379	2.74889	157.50
-.01480	6.14394	2.68344	153.75
-.01115	5.99409	2.61799	150.00
-.00438	5.84423	2.55254	146.25
.00337	5.69438	2.48709	142.50
.01262	5.54453	2.42164	138.75
.02851	5.39468	2.35619	135.00
.05209	5.24482	2.29074	131.25
.07251	5.09497	2.22529	127.50
.07506	4.94512	2.15984	123.75
.05762	4.79527	2.09440	120.00
.03329	4.64542	2.02895	116.25
.01535	4.49556	1.96350	112.50
.00524	4.34571	1.89805	108.75
-.00255	4.19586	1.83260	105.00
-.00988	4.04601	1.76715	101.25
-.01441	3.89616	1.70170	97.50
-.01579	3.74630	1.63625	93.75
-.01669	3.59645	1.57080	90.00
-.01835	3.44660	1.50535	86.25
-.01949	3.29675	1.43990	82.50
-.01947	3.14689	1.37445	78.75
-.01935	2.99704	1.30900	75.00
-.01971	2.84719	1.24355	71.25
-.01998	2.69734	1.17810	67.50
-.01991	2.54749	1.11265	63.75
-.01991	2.39763	1.04720	60.00
-.01990	2.24778	.98175	56.25
-.01957	2.09793	.91630	52.50
-.01936	1.94808	.85085	48.75
-.01954	1.79823	.78540	45.00
-.01916	1.64837	.71995	41.25
-.01769	1.49852	.65450	37.50
-.01629	1.34867	.58905	33.75
-.01546	1.19882	.52360	30.00
-.01306	1.04896	.45815	26.25
-.00723	.89911	.39270	22.50
.00041	.74926	.32725	18.75
.00857	.59941	.26180	15.00
.02121	.44956	.19635	11.25
.04248	.29970	.13090	7.50
.06608	.14985	.06545	3.75
.07675	.00000	.00000	.00

)7675 -.01998

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

H/d=.5851 HEIGHT=4.6553E-04, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .00000, CRITER., EULER

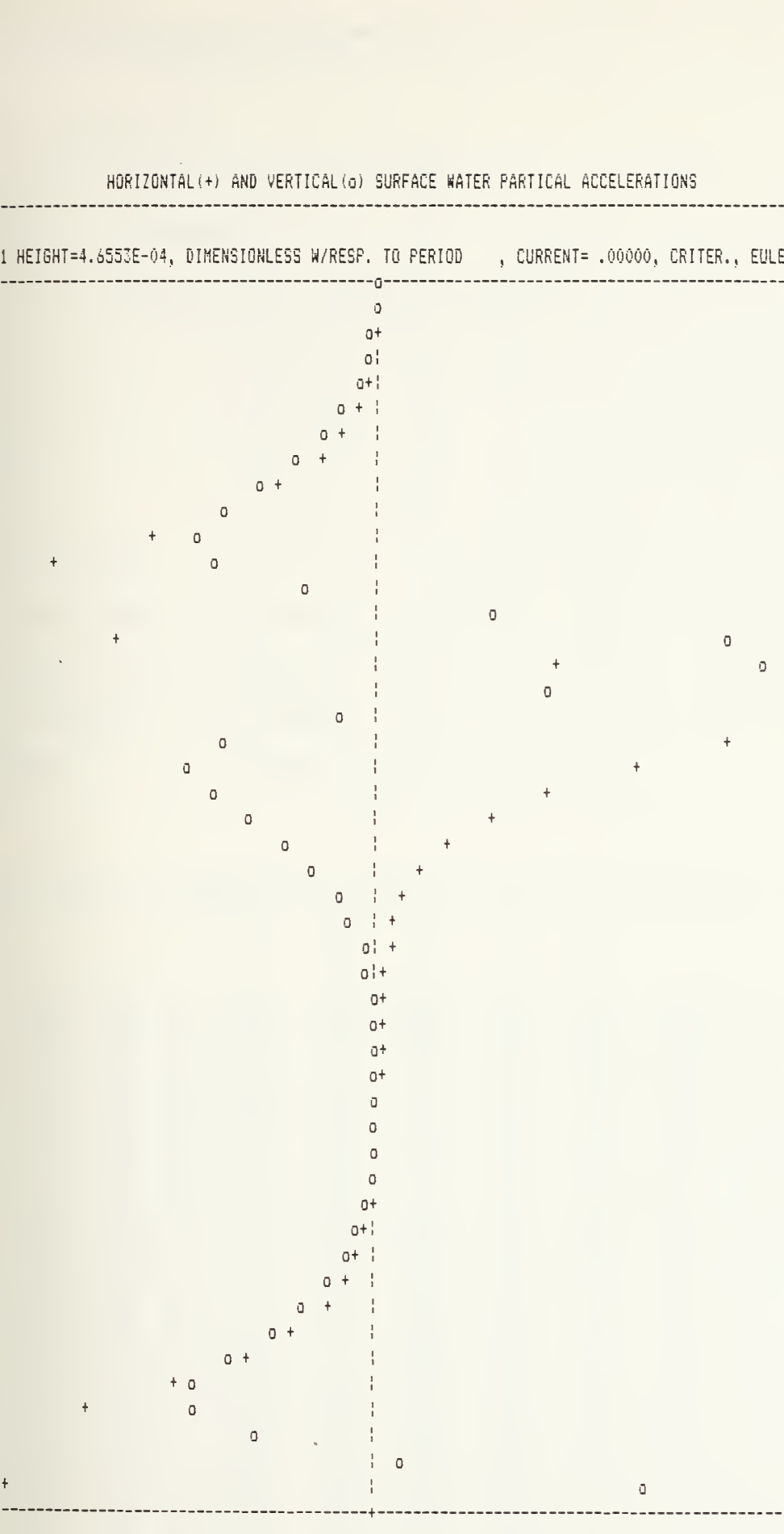
U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.04559	.00000	3.14159	180.00
-.04548	.00078	3.07614	176.25
-.04513	.00172	3.01069	172.50
-.04446	.00304	2.94524	168.75
-.04332	.00502	2.87979	165.00
-.04147	.00804	2.81434	161.25
-.03845	.01261	2.74889	157.50
-.03348	.01947	2.68344	153.75
-.02562	.02968	2.61799	150.00
-.01326	.04430	2.55254	146.25
.00688	.06277	2.48709	142.50
.03858	.08208	2.42164	138.75
.08492	.09814	2.35619	135.00
.15034	.09910	2.29074	131.25
.21985	.05405	2.22529	127.50
.22986	-.03559	2.15984	123.75
.16737	-.09425	2.09440	120.00
.09791	-.10046	2.02895	116.25
.04762	-.08613	1.96350	112.50
.01290	-.06722	1.89805	108.75
-.00957	-.04825	1.83260	105.00
-.02331	-.03259	1.76715	101.25
-.03200	-.02145	1.70170	97.50
-.03756	-.01396	1.63625	93.75
-.04096	-.00898	1.57080	90.00
-.04304	-.00570	1.50535	86.25
-.04436	-.00357	1.43990	82.50
-.04517	-.00222	1.37445	78.75
-.04566	-.00136	1.30900	75.00
-.04597	-.00080	1.24355	71.25
-.04614	-.00040	1.17810	67.50
-.04620	-.00009	1.11265	63.75
-.04618	.00020	1.04720	60.00
-.04608	.00054	.98175	56.25
-.04587	.00099	.91630	52.50
-.04550	.00165	.85085	48.75
-.04490	.00267	.78540	45.00
-.04392	.00429	.71995	41.25
-.04235	.00680	.65450	37.50
-.03984	.01067	.58905	33.75
-.03571	.01651	.52360	30.00
-.02909	.02526	.45815	26.25
-.01876	.03811	.39270	22.50
-.00213	.05534	.32725	18.75
.02475	.07474	.26180	15.00
.06496	.09266	.19635	11.25
.12270	.10217	.13090	7.50
.19588	.07890	.06545	3.75
.23681	.00000	.00000	.00

23681

-.10046

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

1 HEIGHT=4.6553E-04, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .00000, CRITER., EULER



Ax	Ay	DIST.	ANGLE
*1/G	*1/G	*K	DEGREES
.00000	.00557	3.14159	180.00
.00164	.00612	3.07614	176.25
.00356	.00805	3.01069	172.50
.00640	.01175	2.94524	168.75
.01075	.01768	2.87979	165.00
.01718	.02690	2.81434	161.25
.02741	.04082	2.74889	157.50
.04424	.06031	2.68344	153.75
.07021	.08550	2.61799	150.00
.10880	.11382	2.55254	146.25
.16417	.13274	2.48709	142.50
.23173	.11951	2.42164	138.75
.29613	.05484	2.35619	135.00
.31954	-.07835	2.29074	131.25
.18444	-.24603	2.22529	127.50
-.12221	-.27149	2.15984	123.75
-.30859	-.11757	2.09440	120.00
-.30771	.03126	2.02895	116.25
-.24710	.10995	1.96350	112.50
-.17876	.13343	1.89805	108.75
-.11979	.11967	1.83260	105.00
-.07776	.09180	1.76715	101.25
-.04930	.06545	1.70170	97.50
-.03054	.04460	1.63625	93.75
-.01916	.02933	1.57080	90.00
-.01225	.01909	1.50535	86.25
-.00758	.01240	1.43990	82.50
-.00453	.00789	1.37445	78.75
-.00282	.00501	1.30900	75.00
-.00173	.00343	1.24355	71.25
-.00083	.00257	1.17810	67.50
-.00016	.00213	1.11265	63.75
.00040	.00223	1.04720	60.00
.00114	.00284	.98175	56.25
.00211	.00395	.91630	52.50
.00339	.00596	.85085	48.75
.00554	.00941	.78540	45.00
.00917	.01466	.71995	41.25
.01457	.02255	.65450	37.50
.02289	.03460	.58905	33.75
.03681	.05199	.52360	30.00
.05899	.07505	.45815	26.25
.09210	.10294	.39270	22.50
.14071	.12794	.32725	18.75
.20495	.12985	.26180	15.00
.27280	.08704	.19635	11.25
.32101	-.01806	.13090	7.50
.26442	-.18613	.06545	3.75
.00000	-.28933	.00000	.00

-.30859

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

EPTH: FINITE, HEIGHT/DEPTH= .5851

..VE HEIGHT 4.655280E-04,DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .00

OLUTION OF ORDER 23 NON-DIMENSIONALIZED BY WAVE NUMBER, 8 HEIGHT STEP(S).

WATER DEPTH	.14921
WAVE HEIGHT	8.73014E-02
WAVE PERIOD	13.694
WAVE SPEED	.45882
MEAN EULERIAN FLUID SPEED	.00000
MEAN MASS TRANSPORT SPEED	5.16125E-03
MEAN FLUID SPEED RELATIVE TO WAVE	.45882
VOLUME FLUX DUE TO WAVES	7.70102E-04
BERNOULLI CONSTANT	.10590

OLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.08095	.23545	.00000	.00000	-.25818	.00000	.0554348	.0000000	.0127590	.0000000	.0000000	.0000000	.0000000	.0000000
.07136	.22485	.00000	.00000	-.24673	.00717	.0505597	.0000000	.0111521	.0000000	.0005083	.0000000	.0001147	.0000000
.06177	.21519	.00000	.00000	-.23451	.01445	.0463065	.0000000	.0097639	.0000000	.0009727	.0000000	.0002150	.0000000
.05218	.20637	.00000	.00000	-.22183	.02185	.0425872	.0000000	.0085767	.0000000	.0013990	.0000000	.0003030	.0000000
.04259	.19831	.00000	.00000	-.20896	.02938	.0393273	.0000000	.0075432	.0000000	.0017918	.0000000	.0003802	.0000000
.03300	.19096	.00000	.00000	-.19607	.03702	.0364661	.0000000	.0066446	.0000000	.0021552	.0000000	.0004483	.0000000
.02341	.18425	.00000	.00000	-.18331	.04480	.0339495	.0000000	.0058604	.0000000	.0024929	.0000000	.0005082	.0000000
.01382	.17814	.00000	.00000	-.17075	.05269	.0317337	.0000000	.0051736	.0000000	.0028078	.0000000	.0005611	.0000000
.00423	.17257	.00000	.00000	-.15846	.06070	.0297809	.0000000	.0045696	.0000000	.0031028	.0000000	.0006079	.0000000
-.00536	.16751	.00000	.00000	-.14649	.06883	.0280592	.0000000	.0040364	.0000000	.0033801	.0000000	.0006491	.0000000
-.01495	.16292	.00000	.00000	-.13485	.07707	.0265413	.0000000	.0035635	.0000000	.0036419	.0000000	.0006856	.0000000
-.02454	.15876	.00000	.00000	-.12355	.08542	.0252040	.0000000	.0031422	.0000000	.0038901	.0000000	.0007177	.0000000
-.03413	.15501	.00000	.00000	-.11260	.09388	.0240276	.0000000	.0027651	.0000000	.0041261	.0000000	.0007461	.0000000
-.04372	.15164	.00000	.00000	-.10197	.10244	.0229951	.0000000	.0024258	.0000000	.0043516	.0000000	.0007709	.0000000
-.05331	.14853	.00000	.00000	-.09165	.11110	.0220923	.0000000	.0021187	.0000000	.0045678	.0000000	.0007927	.0000000
-.06290	.14597	.00000	.00000	-.08162	.11986	.0213068	.0000000	.0018390	.0000000	.0047759	.0000000	.0008117	.0000000
-.07249	.14353	.00000	.00000	-.07186	.12872	.0206283	.0000000	.0015826	.0000000	.0049770	.0000000	.0008281	.0000000
-.08208	.14159	.00000	.00000	-.06234	.13766	.0200480	.0000000	.0013458	.0000000	.0051720	.0000000	.0008422	.0000000
-.09167	.13985	.00000	.00000	-.05303	.14670	.0195586	.0000000	.0011254	.0000000	.0053619	.0000000	.0008540	.0000000
-.10126	.13840	.00000	.00000	-.04391	.15583	.0191542	.0000000	.0009185	.0000000	.0055476	.0000000	.0008638	.0000000
-.11085	.13722	.00000	.00000	-.03494	.16504	.0188296	.0000000	.0007223	.0000000	.0057297	.0000000	.0008717	.0000000
-.12044	.13631	.00000	.00000	-.02610	.17434	.0185811	.0000000	.0005346	.0000000	.0059091	.0000000	.0008777	.0000000
-.13003	.13567	.00000	.00000	-.01735	.18372	.0184055	.0000000	.0003530	.0000000	.0060864	.0000000	.0008820	.0000000
-.13962	.13528	.00000	.00000	-.00866	.19318	.0183011	.0000000	.0001755	.0000000	.0062625	.0000000	.0008845	.0000000
-.14921	.13515	.00000	.00000	.00000	.20273	.0182664	.0000000	.0000000	.0000000	.0064378	.0000000	.0008853	.0000000

LUTION VS DEPTH, THETA= 3.75 DEGREES, KX= .0654 RADIANS, H/d= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.07245	.20517	.06516	.21040	-.17867	-.00084	.0420960	.2103966	.0093308	.0466354	.0000000	.0000000	.0000000	.0000000
.06321	.19754	.05978	.19294	-.17391	.00677	.0390223	.1929354	.0082891	.0409832	.0003746	.0018625	.0000814	.0004046
.05398	.19051	.05466	.17719	-.16801	.01443	.0362934	.1771918	.0073742	.0360025	.0007224	.0035717	.0001537	.0007601
.04474	.18403	.05033	.16300	-.16126	.02214	.0338672	.1629992	.0065685	.0316133	.0010464	.0051426	.0002181	.0010723
.03550	.17807	.04616	.15021	-.15391	.02992	.0317074	.1502076	.0058567	.0277452	.0013492	.0065889	.0002755	.0013465
.02627	.17258	.04232	.13868	-.14615	.03777	.0297828	.1386828	.0052262	.0243356	.0016331	.0079230	.0003266	.0015870
.01703	.16753	.03876	.12830	-.13812	.04569	.0280666	.1283047	.0046658	.0213295	.0019003	.0091559	.0003723	.0017978
.00780	.16290	.03546	.11897	-.12994	.05369	.0265356	.1189657	.0041662	.0186783	.0021524	.0102977	.0004131	.0019826
-.00144	.15865	.03239	.11057	-.12168	.06177	.0251696	.1105699	.0037193	.0163389	.0023912	.0113577	.0004495	.0021443
-.01067	.15476	.02952	.10303	-.11342	.06992	.0239514	.1030320	.0033181	.0142735	.0026180	.0123441	.0004820	.0022856
-.01991	.15121	.02684	.09628	-.10519	.07814	.0228659	.0962758	.0029565	.0124483	.0028342	.0132644	.0005110	.0024090
-.02915	.14799	.02433	.09023	-.09704	.08644	.0219000	.0902340	.0026294	.0108338	.0030409	.0141257	.0005368	.0025165
-.03838	.14506	.02196	.08485	-.08899	.09482	.0210425	.0848466	.0023321	.0094033	.0032392	.0149342	.0005597	.0026100
-.04762	.14242	.01972	.08006	-.08104	.10327	.0202836	.0800609	.0020607	.0081335	.0034301	.0156957	.0005800	.0026910
-.05685	.14005	.01759	.07583	-.07321	.11179	.0196149	.0758304	.0018116	.0070034	.0036143	.0164156	.0005979	.0027609
-.06609	.13795	.01556	.07211	-.06549	.12039	.0190291	.0721144	.0015817	.0059942	.0037928	.0170987	.0006135	.0028209
-.07532	.13609	.01363	.06888	-.05789	.12906	.0185199	.0688773	.0013683	.0050890	.0039661	.0177498	.0006271	.0028721
-.08456	.13447	.01175	.06609	-.05039	.13779	.0180821	.0660886	.0011690	.0042726	.0041352	.0183731	.0006389	.0029153
-.09379	.13308	.00997	.06372	-.04300	.14660	.0177111	.0637219	.0009814	.0035311	.0043005	.0189725	.0006488	.0029513
-.10303	.13192	.00823	.06176	-.03569	.15547	.0174032	.0617552	.0008036	.0028517	.0044626	.0195519	.0006570	.0029808
-.11227	.13098	.00653	.06017	-.02846	.16441	.0171552	.0601702	.0006338	.0022228	.0046222	.0201150	.0006637	.0030043
-.12150	.13025	.00487	.05895	-.02129	.17341	.0169649	.0589523	.0004700	.0016334	.0047797	.0206650	.0006688	.0030221
-.13074	.12973	.00323	.05809	-.01417	.18248	.0168302	.0580903	.0003109	.0010730	.0049358	.0212053	.0006724	.0030346
-.13997	.12942	.00161	.05758	-.00708	.19162	.0167499	.0575762	.0001547	.0005318	.0050909	.0217396	.0006745	.0030420
-.14921	.12932	.00000	.05741	.00000	.20083	.0167232	.0574053	.0000000	.0000000	.0052454	.0222706	.0006752	.0030444

LUTION VS DEPTH, THETA= 7.50 DEGREES, KX= .1309 RADIANS, H/d= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.05306	.14586	.08991	.27714	-.03581	-.00017	.0212757	.2771424	.0043033	.0560562	.0000000	.0000000	.0000000	.0000000
.04463	.14306	.08350	.25931	-.04095	.00794	.0204662	.2593150	.0039671	.0502649	.0001759	.0022606	.0000349	.0004480
.03620	.14040	.07750	.24294	-.04467	.01600	.0197114	.2429379	.0036547	.0450430	.0003452	.0043770	.0000670	.0008496
.02777	.13787	.07189	.22791	-.04719	.02404	.0190088	.2279053	.0033642	.0403351	.0005084	.0063610	.0000965	.0012094
.01935	.13548	.06662	.21412	-.04870	.03206	.0183559	.2141192	.0030940	.0360907	.0006658	.0082237	.0001238	.0015315
.01092	.13323	.06167	.20149	-.04936	.04008	.0177503	.2014893	.0028423	.0322538	.0008180	.0099750	.0001488	.0018195
.00249	.13111	.05701	.18993	-.04929	.04809	.0171896	.1899325	.0026076	.0288125	.0009552	.0116244	.0001717	.0020769
-.00594	.12912	.05261	.17937	-.04863	.05610	.0166717	.1793727	.0023886	.0256989	.0011079	.0131806	.0001928	.0023066
-.01436	.12726	.04845	.16974	-.04746	.06413	.0161944	.1697403	.0021837	.0228884	.0012464	.0146517	.0002121	.0025113
-.02279	.12552	.04450	.16097	-.04586	.07216	.0157557	.1609718	.0019918	.0203494	.0013810	.0160453	.0002297	.0026935
-.03122	.12391	.04075	.15301	-.04390	.08021	.0153537	.1530095	.0018116	.0180533	.0015121	.0173683	.0002457	.0028553
-.03965	.12242	.03717	.14580	-.04165	.08828	.0149867	.1458011	.0016420	.0159740	.0016399	.0186275	.0002602	.0029987
-.04808	.12105	.03375	.13930	-.03914	.09636	.0146532	.1392993	.0014819	.0140877	.0017648	.0198289	.0002734	.0031254
-.05650	.11980	.03048	.13346	-.03643	.10447	.0143515	.1334617	.0013305	.0123725	.0018871	.0209782	.0002852	.0032369
-.06493	.11866	.02733	.12825	-.03355	.11261	.0140805	.1282503	.0011867	.0108086	.0020069	.0220810	.0002959	.0033346
-.07336	.11764	.02429	.12363	-.03052	.12076	.0138388	.1236311	.0010497	.0093774	.0021245	.0231424	.0003053	.0034196
-.08179	.11673	.02135	.11957	-.02737	.12895	.0136254	.1195745	.0009186	.0080619	.0022402	.0241673	.0003136	.0034931
-.09021	.11593	.01850	.11605	-.02413	.13716	.0134393	.1160540	.0007928	.0068465	.0023543	.0251602	.0003208	.0035559
-.09864	.11524	.01572	.11305	-.02081	.14540	.0132798	.1130473	.0006715	.0057164	.0024669	.0261256	.0003270	.0036089
-.10707	.11466	.01301	.11053	-.01743	.15366	.0131459	.1105348	.0005540	.0046578	.0025782	.0270677	.0003321	.0036526
-.11550	.11418	.01035	.10850	-.01400	.16196	.0130373	.1085007	.0004395	.0036577	.0026886	.0279907	.0003363	.0036876
-.12393	.11381	.00772	.10693	-.01053	.17028	.0129532	.1069318	.0003275	.0027036	.0027981	.0288985	.0003395	.0037144
-.13235	.11355	.00513	.10582	-.00703	.17864	.0128935	.1058183	.0002173	.0017836	.0029070	.0297950	.0003418	.0037333
-.14078	.11339	.00256	.10515	-.00352	.18702	.0128578	.1051530	.0001084	.0008862	.0030155	.0306840	.0003432	.0037446
-.14921	.11334	.00000	.10493	.00000	.19543	.0128459	.1049317	.0000000	.0000000	.0031238	.0315693	.0003437	.0037483

LUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/c= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.02191	.05581	.07007	.19361	.11111	.00033	.0031145	.1936052	.0005329	.0331288	.0000000	.0000000	.0000000	.0000000
.01478	.05708	.06646	.18970	.10130	.00822	.0032576	.1897038	.0005342	.0311087	.0000227	.0013665	.0000038	.0002290
.00765	.05823	.06294	.18586	.09229	.01604	.0033903	.1858589	.0005318	.0291530	.0000464	.0027053	.0000076	.0004438
.00052	.05927	.05950	.18209	.08401	.02380	.0035130	.1820949	.0005260	.0272643	.0000710	.0040170	.0000114	.0006449
-.00661	.06022	.05614	.17843	.07641	.03150	.0036259	.1784323	.0005170	.0254437	.0000965	.0053023	.0000151	.0008328
-.01374	.06107	.05286	.17489	.06941	.03915	.0037297	.1748884	.0005053	.0236915	.0001227	.0065618	.0000187	.0010080
-.02087	.06184	.04965	.17148	.06298	.04675	.0038248	.1714778	.0004909	.0220068	.0001496	.0077966	.0000223	.0011709
-.02800	.06254	.04652	.16821	.05705	.05430	.0039116	.1682126	.0004741	.0203885	.0001772	.0090075	.0000257	.0013221
-.03513	.06317	.04344	.16510	.05159	.06182	.0039906	.1651031	.0004552	.0188344	.0002054	.0101958	.0000290	.0014619
-.04226	.06374	.04043	.16216	.04655	.06930	.0040623	.1621575	.0004344	.0173423	.0002341	.0113624	.0000322	.0015908
-.04939	.06424	.03748	.15938	.04190	.07675	.0041271	.1593828	.0004120	.0159091	.0002633	.0125087	.0000352	.0017094
-.05652	.06470	.03458	.15678	.03759	.08416	.0041855	.1567846	.0003879	.0145320	.0002929	.0136358	.0000381	.0018179
-.06365	.06510	.03173	.15437	.03359	.09154	.0042380	.1543675	.0003626	.0132073	.0003229	.0147450	.0000408	.0019168
-.07078	.06546	.02893	.15214	.02987	.09890	.0042848	.1521352	.0003360	.0119316	.0003533	.0158377	.0000432	.0020064
-.07791	.06577	.02616	.15009	.02641	.10623	.0043263	.1500906	.0003085	.0107012	.0003840	.0169151	.0000455	.0020871
-.08504	.06605	.02344	.14824	.02316	.11353	.0043629	.1482361	.0002800	.0095120	.0004150	.0179786	.0000476	.0021592
-.09217	.06629	.02075	.14657	.02012	.12082	.0043948	.1465734	.0002507	.0083603	.0004462	.0190295	.0000495	.0022229
-.09930	.06650	.01809	.14510	.01724	.12808	.0044223	.1451041	.0002207	.0072419	.0004777	.0200693	.0000512	.0022785
-.10643	.06668	.01546	.14383	.01451	.13532	.0044458	.1438290	.0001902	.0061528	.0005093	.0210994	.0000527	.0023262
-.11356	.06682	.01285	.14275	.01191	.14255	.0044652	.1427491	.0001592	.0050889	.0005410	.0221210	.0000539	.0023663
-.12069	.06694	.01026	.14186	.00940	.14975	.0044809	.1418649	.0001278	.0040459	.0005729	.0231356	.0000549	.0023989
-.12782	.06703	.00768	.14118	.00698	.15694	.0044930	.1411768	.0000961	.0030197	.0006049	.0241446	.0000557	.0024241
-.13495	.06709	.00511	.14069	.00462	.16411	.0045015	.1406851	.0000642	.0020061	.0006370	.0251494	.0000563	.0024420
-.14208	.06713	.00255	.14039	.00230	.17127	.0045066	.1403900	.0000321	.0010010	.0006691	.0261514	.0000567	.0024527
-.14921	.06714	.00000	.14029	.00000	.17841	.0045083	.1402917	.0000000	.0000000	.0007012	.0271520	.0000568	.0024563

LUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
-.00161	-.00381	.01617	.03689	.04881	.00037	-.0000145	.0368939	-.0000021	.0054455	.0000000	.0000000	.0000000	.0000000
-.00776	-.00319	.01565	.03852	.04695	.00682	-.0000102	.0385177	-.0000014	.0054483	-.0000001	.0002319	.0000000	.0000335
-.01391	-.00259	.01510	.04006	.04505	.01325	-.0000067	.0400573	-.0000009	.0054197	-.0000001	.0004735	.0000000	.0000669
-.02006	-.00202	.01454	.04151	.04313	.01967	-.0000041	.0415140	-.0000005	.0053615	-.0000002	.0007243	.0000000	.0001001
-.02621	-.00148	.01396	.04289	.04118	.02608	-.0000022	.0428893	-.0000003	.0052753	-.0000002	.0009839	.0000000	.0001328
-.03236	-.00096	.01336	.04418	.03921	.03248	-.0000009	.0441846	-.0000001	.0051629	-.0000002	.0012516	.0000000	.0001649
-.03851	-.00046	.01275	.04540	.03722	.03886	-.0000002	.0454016	.0000000	.0050259	-.0000002	.0015271	.0000000	.0001962
-.04466	.00000	.01212	.04654	.03522	.04523	.0000000	.0465417	.0000000	.0048659	-.0000002	.0018098	.0000000	.0002266
-.05081	.00045	.01148	.04761	.03320	.05159	.0000002	.0476066	.0000000	.0046844	-.0000002	.0020993	.0000000	.0002560
-.05696	.00086	.01082	.04860	.03117	.05794	.0000007	.0485979	.0000001	.0044831	-.0000002	.0023951	.0000000	.0002842
-.06311	.00125	.01015	.04952	.02913	.06428	.0000016	.0495171	.0000001	.0042634	-.0000002	.0026968	.0000000	.0003111
-.06926	.00162	.00947	.05037	.02707	.07060	.0000026	.0503656	.0000002	.0040267	-.0000002	.0030040	.0000000	.0003366
-.07541	.00195	.00878	.05114	.02501	.07691	.0000038	.0511450	.0000003	.0037745	-.0000002	.0033161	.0000000	.0003606
-.08156	.00226	.00809	.05186	.02295	.08321	.0000051	.0518566	.0000003	.0035081	-.0000001	.0036328	.0000000	.0003829
-.08771	.00255	.00738	.05250	.02087	.08949	.0000065	.0525017	.0000004	.0032288	-.0000001	.0039537	.0000000	.0004037
-.09386	.00280	.00666	.05308	.01880	.09576	.0000079	.0530815	.0000004	.0029380	.0000000	.0042784	.0000000	.0004226
-.10001	.00303	.00594	.05360	.01672	.10202	.0000092	.0535971	.0000005	.0026369	.0000000	.0046064	.0000000	.0004398
-.10616	.00323	.00521	.05405	.01463	.10827	.0000105	.0540497	.0000005	.0023268	.0000001	.0049375	.0000000	.0004550
-.11231	.00341	.00448	.05444	.01255	.11450	.0000116	.0544400	.0000004	.0020088	.0000001	.0052711	.0000000	.0004684
-.11846	.00356	.00374	.05477	.01046	.12072	.0000127	.0547689	.0000004	.0016841	.0000002	.0056069	.0000000	.0004797
-.12461	.00368	.00299	.05504	.00837	.12693	.0000135	.0550370	.0000003	.0013539	.0000003	.0059445	.0000000	.0004891
-.13076	.00378	.00225	.05524	.00628	.13313	.0000143	.0552450	.0000003	.0010193	.0000004	.0062836	.0000000	.0004964
-.13691	.00384	.00150	.05539	.00419	.13931	.0000148	.0553932	.0000002	.0006813	.0000005	.0066238	.0000000	.0005016
-.14306	.00388	.00075	.05548	.00209	.14548	.0000151	.0554820	.0000001	.0003412	.0000006	.0069648	.0000000	.0005047
-.14921	.00390	.00000	.05551	.00000	.15163	.0000152	.0555116	.0000000	.0000000	.0000007	.0073061	.0000000	.0005058

SOLUTION VS DEPTH, THETA= 45.00 DEGREES, KX= .7854 RADIANS, H/d= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
-.00587	-.01324	.00272	.00584	.00893	.00034	-.0001754	.0058417	-.0000251	.0008374	.0000000	.0000000	.0000000	.0000000
-.01184	-.01313	.00264	.00620	.00857	.00637	-.0001725	.0061987	-.0000237	.0008515	-.0000010	.0000360	-.0000001	.0000050
-.01781	-.01303	.00256	.00654	.00839	.01239	-.0001697	.0065444	-.0000223	.0008599	-.0000021	.0000740	-.0000003	.0000102
-.02378	-.01292	.00247	.00688	.00811	.01841	-.0001670	.0068782	-.0000209	.0008627	-.0000031	.0001141	-.0000004	.0000153
-.02976	-.01282	.00238	.00720	.00780	.02443	-.0001644	.0071997	-.0000196	.0008600	-.0000041	.0001561	-.0000005	.0000204
-.03573	-.01272	.00229	.00751	.00749	.03045	-.0001619	.0075083	-.0000184	.0008520	-.0000050	.0002001	-.0000006	.0000256
-.04170	-.01263	.00219	.00780	.00717	.03647	-.0001596	.0078037	-.0000172	.0008350	-.0000060	.0002458	-.0000008	.0000306
-.04767	-.01254	.00209	.00809	.00683	.04248	-.0001574	.0080853	-.0000160	.0008209	-.0000069	.0002932	-.0000009	.0000356
-.05365	-.01246	.00199	.00835	.00648	.04849	-.0001553	.0083529	-.0000148	.0007982	-.0000079	.0003423	-.0000009	.0000404
-.05962	-.01238	.00188	.00861	.00613	.05450	-.0001533	.0086061	-.0000137	.0007710	-.0000088	.0003930	-.0000010	.0000451
-.06559	-.01231	.00177	.00884	.00576	.06051	-.0001514	.0088444	-.0000127	.0007395	-.0000097	.0004451	-.0000011	.0000496
-.07156	-.01224	.00165	.00907	.00539	.06652	-.0001497	.0090677	-.0000116	.0007041	-.0000106	.0004986	-.0000012	.0000539
-.07754	-.01217	.00154	.00928	.00500	.07252	-.0001481	.0092755	-.0000106	.0006648	-.0000115	.0005534	-.0000012	.0000580
-.08351	-.01211	.00142	.00947	.00461	.07852	-.0001466	.0094677	-.0000096	.0006220	-.0000124	.0006093	-.0000013	.0000618
-.08948	-.01205	.00130	.00964	.00422	.08452	-.0001453	.0096440	-.0000087	.0005760	-.0000132	.0006664	-.0000014	.0000654
-.09545	-.01200	.00117	.00980	.00381	.09052	-.0001441	.0098041	-.0000077	.0005270	-.0000141	.0007245	-.0000014	.0000687
-.10143	-.01196	.00105	.00995	.00340	.09651	-.0001430	.0099480	-.0000068	.0004753	-.0000150	.0007835	-.0000015	.0000717
-.10740	-.01192	.00092	.01008	.00299	.10251	-.0001420	.0100753	-.0000059	.0004212	-.0000158	.0008433	-.0000015	.0000744
-.11337	-.01188	.00079	.01019	.00257	.10849	-.0001412	.0101859	-.0000051	.0003650	-.0000167	.0009038	-.0000015	.0000767
-.11935	-.01185	.00066	.01028	.00215	.11448	-.0001405	.0102798	-.0000042	.0003070	-.0000175	.0009649	-.0000016	.0000787
-.12532	-.01183	.00053	.01036	.00172	.12047	-.0001399	.0103567	-.0000033	.0002474	-.0000183	.0010265	-.0000016	.0000804
-.13129	-.01181	.00040	.01042	.00129	.12645	-.0001395	.0104167	-.0000025	.0001866	-.0000192	.0010885	-.0000016	.0000817
-.13726	-.01180	.00027	.01046	.00086	.13243	-.0001391	.0104596	-.0000017	.0001249	-.0000200	.0011509	-.0000016	.0000826
-.14324	-.01179	.00013	.01049	.00043	.13840	-.0001389	.0104853	-.0000008	.0000626	-.0000208	.0012134	-.0000016	.0000832
-.14921	-.01178	.00000	.01049	.00000	.14438	-.0001389	.0104939	.0000000	.0000000	-.0000217	.0012761	-.0000016	.0000834

SOLUTION VS DEPTH, THETA= 60.00 DEGREES, KX= 1.0472 RADIANS, H/d= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
-.00652	-.01472	.00043	.00091	.00145	.00030	-.0002167	.0009098	-.0000309	.0001298	.0000000	.0000000	.0000000	.0000000
-.01247	-.01470	.00042	.00097	.00142	.00626	-.0002161	.0009702	-.0000296	.0001327	-.0000013	.0000056	-.0000002	.0000008
-.01841	-.01468	.00041	.00103	.00138	.01221	-.0002156	.0010288	-.0000282	.0001346	-.0000026	.0000115	-.0000004	.0000016
-.02436	-.01467	.00039	.00109	.00133	.01816	-.0002151	.0010854	-.0000269	.0001355	-.0000039	.0000178	-.0000005	.0000024
-.03030	-.01465	.00038	.00114	.00128	.02412	-.0002146	.0011400	-.0000255	.0001356	-.0000051	.0000244	-.0000007	.0000032
-.03625	-.01463	.00037	.00119	.00123	.03007	-.0002142	.0011925	-.0000242	.0001347	-.0000064	.0000314	-.0000008	.0000040
-.04219	-.01462	.00035	.00124	.00118	.03602	-.0002137	.0012428	-.0000229	.0001330	-.0000077	.0000386	-.0000010	.0000048
-.04814	-.01461	.00033	.00129	.00112	.04197	-.0002133	.0012909	-.0000216	.0001305	-.0000089	.0000461	-.0000011	.0000056
-.05408	-.01459	.00032	.00134	.00107	.04793	-.0002129	.0013366	-.0000203	.0001271	-.0000102	.0000539	-.0000012	.0000063
-.06003	-.01458	.00030	.00138	.00101	.05388	-.0002125	.0013800	-.0000190	.0001231	-.0000115	.0000620	-.0000013	.0000071
-.06597	-.01457	.00028	.00142	.00095	.05983	-.0002122	.0014208	-.0000177	.0001183	-.0000127	.0000703	-.0000014	.0000078
-.07192	-.01455	.00026	.00146	.00089	.06578	-.0002118	.0014592	-.0000164	.0001128	-.0000140	.0000789	-.0000015	.0000085
-.07786	-.01454	.00025	.00149	.00082	.07173	-.0002115	.0014949	-.0000151	.0001067	-.0000153	.0000877	-.0000016	.0000091
-.08381	-.01453	.00023	.00153	.00076	.07768	-.0002112	.0015280	-.0000138	.0000999	-.0000165	.0000967	-.0000017	.0000097
-.08975	-.01452	.00021	.00156	.00070	.08363	-.0002110	.0015584	-.0000125	.0000925	-.0000178	.0001059	-.0000018	.0000103
-.09570	-.01452	.00019	.00159	.00063	.08958	-.0002107	.0015860	-.0000113	.0000849	-.0000190	.0001152	-.0000019	.0000108
-.10165	-.01451	.00017	.00161	.00056	.09553	-.0002105	.0016108	-.0000100	.0000766	-.0000203	.0001247	-.0000019	.0000113
-.10759	-.01450	.00015	.00163	.00049	.10148	-.0002103	.0016329	-.0000088	.0000680	-.0000215	.0001343	-.0000020	.0000118
-.11354	-.01450	.00013	.00165	.00042	.10742	-.0002102	.0016520	-.0000075	.0000589	-.0000228	.0001441	-.0000020	.0000121
-.11948	-.01449	.00011	.00167	.00036	.11337	-.0002100	.0016683	-.0000062	.0000496	-.0000240	.0001540	-.0000021	.0000125
-.12543	-.01449	.00009	.00168	.00028	.11932	-.0002099	.0016816	-.0000050	.0000400	-.0000253	.0001639	-.0000021	.0000127
-.13137	-.01448	.00006	.00169	.00021	.12527	-.0002098	.0016920	-.0000037	.0000302	-.0000265	.0001740	-.0000021	.0000129
-.13732	-.01448	.00004	.00170	.00014	.13121	-.0002097	.0016994	-.0000025	.0000202	-.0000278	.0001840	-.0000022	.0000131
-.14326	-.01448	.00002	.00170	.00007	.13716	-.0002097	.0017039	-.0000012	.0000101	-.0000290	.0001942	-.0000022	.0000132
-.14921	-.01448	.00000	.00171	.00000	.14310	-.0002097	.0017054	.0000000	.0000000	-.0000303	.0002043	-.0000022	.0000132

SOLUTION VS DEPTH, THETA= 90.00 DEGREES, KX= 1.5708 RADIANS, H/c= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
-.00655	-.01499	.00001	.00002	.00007	.00020	-.0002247	.0000225	-.0000321	.0000032	.0000000	.0000000	.0000000	.0000000
-.01249	-.01499	.00001	.00002	.00006	.00615	-.0002246	.0000241	-.0000307	.0000033	-.0000013	.0000001	-.0000002	.0000000
-.01844	-.01499	.00001	.00003	.00006	.01209	-.0002246	.0000257	-.0000294	.0000034	-.0000027	.0000003	-.0000004	.0000000
-.02438	-.01499	.00001	.00003	.00005	.01804	-.0002246	.0000271	-.0000280	.0000034	-.0000040	.0000004	-.0000005	.0000001
-.03033	-.01499	.00001	.00003	.00005	.02398	-.0002246	.0000285	-.0000267	.0000034	-.0000053	.0000006	-.0000007	.0000001
-.03627	-.01499	.00001	.00003	.00005	.02993	-.0002246	.0000299	-.0000254	.0000034	-.0000067	.0000008	-.0000009	.0000001
-.04221	-.01498	.00001	.00003	.00004	.03587	-.0002245	.0000312	-.0000240	.0000033	-.0000080	.0000010	-.0000010	.0000001
-.04816	-.01498	.00001	.00003	.00004	.04182	-.0002245	.0000324	-.0000227	.0000033	-.0000093	.0000012	-.0000011	.0000001
-.05410	-.01498	.00001	.00003	.00004	.04776	-.0002245	.0000336	-.0000214	.0000032	-.0000107	.0000013	-.0000013	.0000002
-.06005	-.01498	.00001	.00003	.00003	.05370	-.0002245	.0000347	-.0000200	.0000031	-.0000120	.0000016	-.0000014	.0000002
-.06599	-.01498	.00001	.00004	.00003	.05965	-.0002245	.0000357	-.0000187	.0000030	-.0000133	.0000018	-.0000015	.0000002
-.07193	-.01498	.00001	.00004	.00003	.06559	-.0002245	.0000367	-.0000173	.0000028	-.0000147	.0000020	-.0000016	.0000002
-.07788	-.01498	.00001	.00004	.00003	.07154	-.0002245	.0000376	-.0000160	.0000027	-.0000160	.0000022	-.0000017	.0000002
-.08382	-.01498	.00001	.00004	.00002	.07748	-.0002245	.0000384	-.0000147	.0000025	-.0000174	.0000024	-.0000018	.0000002
-.08977	-.01498	.00001	.00004	.00002	.08343	-.0002245	.0000392	-.0000133	.0000023	-.0000187	.0000027	-.0000019	.0000003
-.09571	-.01498	.00000	.00004	.00002	.08937	-.0002244	.0000399	-.0000120	.0000021	-.0000200	.0000029	-.0000020	.0000003
-.10166	-.01498	.00000	.00004	.00002	.09531	-.0002244	.0000405	-.0000107	.0000019	-.0000214	.0000031	-.0000020	.0000003
-.10760	-.01498	.00000	.00004	.00001	.10126	-.0002244	.0000410	-.0000093	.0000017	-.0000227	.0000034	-.0000021	.0000003
-.11354	-.01498	.00000	.00004	.00001	.10720	-.0002244	.0000415	-.0000080	.0000015	-.0000240	.0000036	-.0000021	.0000003
-.11949	-.01498	.00000	.00004	.00001	.11315	-.0002244	.0000419	-.0000067	.0000012	-.0000254	.0000039	-.0000022	.0000003
-.12543	-.01498	.00000	.00004	.00001	.11909	-.0002244	.0000423	-.0000053	.0000010	-.0000267	.0000041	-.0000022	.0000003
-.13138	-.01498	.00000	.00004	.00001	.12504	-.0002244	.0000425	-.0000040	.0000008	-.0000280	.0000044	-.0000022	.0000003
-.13732	-.01498	.00000	.00004	.00000	.13098	-.0002244	.0000427	-.0000027	.0000005	-.0000294	.0000046	-.0000023	.0000003
-.14326	-.01498	.00000	.00004	.00000	.13692	-.0002244	.0000428	-.0000013	.0000003	-.0000307	.0000049	-.0000023	.0000003
-.14921	-.01498	.00000	.00004	.00000	.14287	-.0002244	.0000429	.0000000	.0000000	-.0000320	.0000051	-.0000023	.0000003

SOLUTION VS DEPTH, THETA=120.00 DEGREES, KX= 2.0944 RADIANS, H/c= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
-.00645	-.01499	.00000	.00001	.00002	.00010	-.0002248	.0000102	-.0000321	.0000015	.0000000	.0000000	.0000000	.0000000
-.01240	-.01499	.00000	.00001	.00002	.00605	-.0002248	.0000091	-.0000308	.0000012	-.0000013	.0000001	-.0000002	.0000000
-.01835	-.01499	.00000	.00001	.00001	.01200	-.0002248	.0000081	-.0000294	.0000011	-.0000027	.0000001	-.0000004	.0000000
-.02429	-.01499	.00000	.00001	.00001	.01795	-.0002248	.0000073	-.0000281	.0000009	-.0000040	.0000002	-.0000005	.0000000
-.03024	-.01499	.00000	.00001	.00001	.02390	-.0002248	.0000065	-.0000267	.0000008	-.0000053	.0000002	-.0000007	.0000000
-.03619	-.01499	.00000	.00001	.00001	.02984	-.0002248	.0000059	-.0000254	.0000007	-.0000067	.0000002	-.0000009	.0000000
-.04214	-.01499	.00000	.00001	.00001	.03579	-.0002248	.0000053	-.0000241	.0000006	-.0000080	.0000003	-.0000010	.0000000
-.04809	-.01499	.00000	.00000	.00001	.04174	-.0002248	.0000048	-.0000227	.0000005	-.0000094	.0000003	-.0000011	.0000000
-.05404	-.01499	.00000	.00000	.00001	.04769	-.0002248	.0000044	-.0000214	.0000004	-.0000107	.0000003	-.0000013	.0000000
-.05998	-.01499	.00000	.00000	.00001	.05364	-.0002248	.0000040	-.0000201	.0000004	-.0000120	.0000003	-.0000014	.0000000
-.06593	-.01499	.00000	.00000	.00000	.05959	-.0002248	.0000037	-.0000187	.0000003	-.0000134	.0000004	-.0000015	.0000000
-.07188	-.01499	.00000	.00000	.00000	.06553	-.0002248	.0000034	-.0000174	.0000003	-.0000147	.0000004	-.0000016	.0000000
-.07783	-.01499	.00000	.00000	.00000	.07148	-.0002248	.0000031	-.0000160	.0000002	-.0000160	.0000004	-.0000017	.0000000
-.08378	-.01499	.00000	.00000	.00000	.07743	-.0002248	.0000029	-.0000147	.0000002	-.0000174	.0000004	-.0000018	.0000000
-.08973	-.01499	.00000	.00000	.00000	.08338	-.0002248	.0000027	-.0000134	.0000002	-.0000187	.0000004	-.0000019	.0000000
-.09567	-.01499	.00000	.00000	.00000	.08933	-.0002248	.0000026	-.0000120	.0000001	-.0000201	.0000005	-.0000020	.0000001
-.10162	-.01499	.00000	.00000	.00000	.09528	-.0002248	.0000024	-.0000107	.0000001	-.0000214	.0000005	-.0000020	.0000001
-.10757	-.01499	.00000	.00000	.00000	.10122	-.0002248	.0000023	-.0000094	.0000001	-.0000227	.0000005	-.0000021	.0000001
-.11352	-.01499	.00000	.00000	.00000	.10717	-.0002248	.0000022	-.0000080	.0000001	-.0000241	.0000005	-.0000021	.0000001
-.11947	-.01499	.00000	.00000	.00000	.11312	-.0002248	.0000021	-.0000067	.0000001	-.0000254	.0000005	-.0000022	.0000001
-.12542	-.01499	.00000	.00000	.00000	.11907	-.0002248	.0000021	-.0000053	.0000000	-.0000267	.0000005	-.0000022	.0000001
-.13136	-.01499	.00000	.00000	.00000	.12502	-.0002248	.0000020	-.0000040	.0000000	-.0000281	.0000005	-.0000023	.0000001
-.13731	-.01499	.00000	.00000	.00000	.13097	-.0002248	.0000020	-.0000027	.0000000	-.0000294	.0000006	-.0000023	.0000001
-.14326	-.01499	.00000	.00000	.00000	.13691	-.0002248	.0000020	-.0000013	.0000000	-.0000308	.0000006	-.0000023	.0000001
-.14921	-.01499	.00000	.00000	.00000	.14286	-.0002248	.0000020	.0000000	.0000000	-.0000321	.0000006	-.0000023	.0000001

OLUTION VS DEPTH, THETA=150.00 DEGREES, KX= 2.6180 RADIANS, H/c= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
-.00637	-.01499	.00000	.00001	.00001	.00003	-.0002248	.0000085	-.0000321	.0000012	.0000000	.0000000	.0000000	.0000000
-.01233	-.01499	.00000	.00001	.00000	.00598	-.0002248	.0000075	-.0000308	.0000010	-.0000013	.0000000	-.0000002	.0000000
-.01828	-.01499	.00000	.00001	.00000	.01193	-.0002248	.0000066	-.0000294	.0000009	-.0000027	.0000001	-.0000004	.0000000
-.02423	-.01499	.00000	.00001	.00000	.01788	-.0002248	.0000058	-.0000281	.0000007	-.0000040	.0000001	-.0000005	.0000000
-.03018	-.01499	.00000	.00001	.00000	.02383	-.0002248	.0000051	-.0000268	.0000006	-.0000054	.0000002	-.0000007	.0000000
-.03613	-.01499	.00000	.00000	.00000	.02978	-.0002248	.0000045	-.0000254	.0000005	-.0000067	.0000002	-.0000009	.0000000
-.04208	-.01499	.00000	.00000	.00000	.03574	-.0002248	.0000039	-.0000241	.0000004	-.0000080	.0000002	-.0000010	.0000000
-.04803	-.01499	.00000	.00000	.00000	.04169	-.0002248	.0000035	-.0000227	.0000003	-.0000094	.0000002	-.0000011	.0000000
-.05399	-.01499	.00000	.00000	.00000	.04764	-.0002248	.0000030	-.0000214	.0000003	-.0000107	.0000003	-.0000013	.0000000
-.05994	-.01499	.00000	.00000	.00000	.05359	-.0002248	.0000027	-.0000201	.0000002	-.0000120	.0000003	-.0000014	.0000000
-.06589	-.01499	.00000	.00000	.00000	.05954	-.0002248	.0000024	-.0000187	.0000002	-.0000134	.0000003	-.0000015	.0000000
-.07184	-.01499	.00000	.00000	.00000	.06549	-.0002248	.0000021	-.0000174	.0000002	-.0000147	.0000003	-.0000016	.0000000
-.07779	-.01499	.00000	.00000	.00000	.07144	-.0002248	.0000019	-.0000161	.0000001	-.0000161	.0000003	-.0000017	.0000000
-.08374	-.01499	.00000	.00000	.00000	.07740	-.0002248	.0000017	-.0000147	.0000001	-.0000174	.0000003	-.0000018	.0000000
-.08969	-.01499	.00000	.00000	.00000	.08335	-.0002248	.0000015	-.0000134	.0000001	-.0000187	.0000003	-.0000019	.0000000
-.09565	-.01499	.00000	.00000	.00000	.08930	-.0002248	.0000013	-.0000120	.0000001	-.0000201	.0000003	-.0000020	.0000000
-.10160	-.01499	.00000	.00000	.00000	.09525	-.0002248	.0000012	-.0000107	.0000001	-.0000214	.0000003	-.0000020	.0000000
-.10755	-.01499	.00000	.00000	.00000	.10120	-.0002248	.0000011	-.0000094	.0000000	-.0000227	.0000004	-.0000021	.0000000
-.11350	-.01499	.00000	.00000	.00000	.10715	-.0002248	.0000010	-.0000080	.0000000	-.0000241	.0000004	-.0000021	.0000000
-.11945	-.01499	.00000	.00000	.00000	.11310	-.0002248	.0000009	-.0000067	.0000000	-.0000254	.0000004	-.0000022	.0000000
-.12540	-.01499	.00000	.00000	.00000	.11906	-.0002248	.0000009	-.0000054	.0000000	-.0000268	.0000004	-.0000022	.0000000
-.13135	-.01499	.00000	.00000	.00000	.12501	-.0002248	.0000008	-.0000040	.0000000	-.0000281	.0000004	-.0000023	.0000000
-.13731	-.01499	.00000	.00000	.00000	.13096	-.0002248	.0000008	-.0000027	.0000000	-.0000294	.0000004	-.0000023	.0000000
-.14326	-.01499	.00000	.00000	.00000	.13691	-.0002248	.0000008	-.0000013	.0000000	-.0000308	.0000004	-.0000023	.0000000
-.14921	-.01499	.00000	.00000	.00000	.14286	-.0002248	.0000008	.0000000	.0000000	-.0000321	.0000004	-.0000023	.0000000

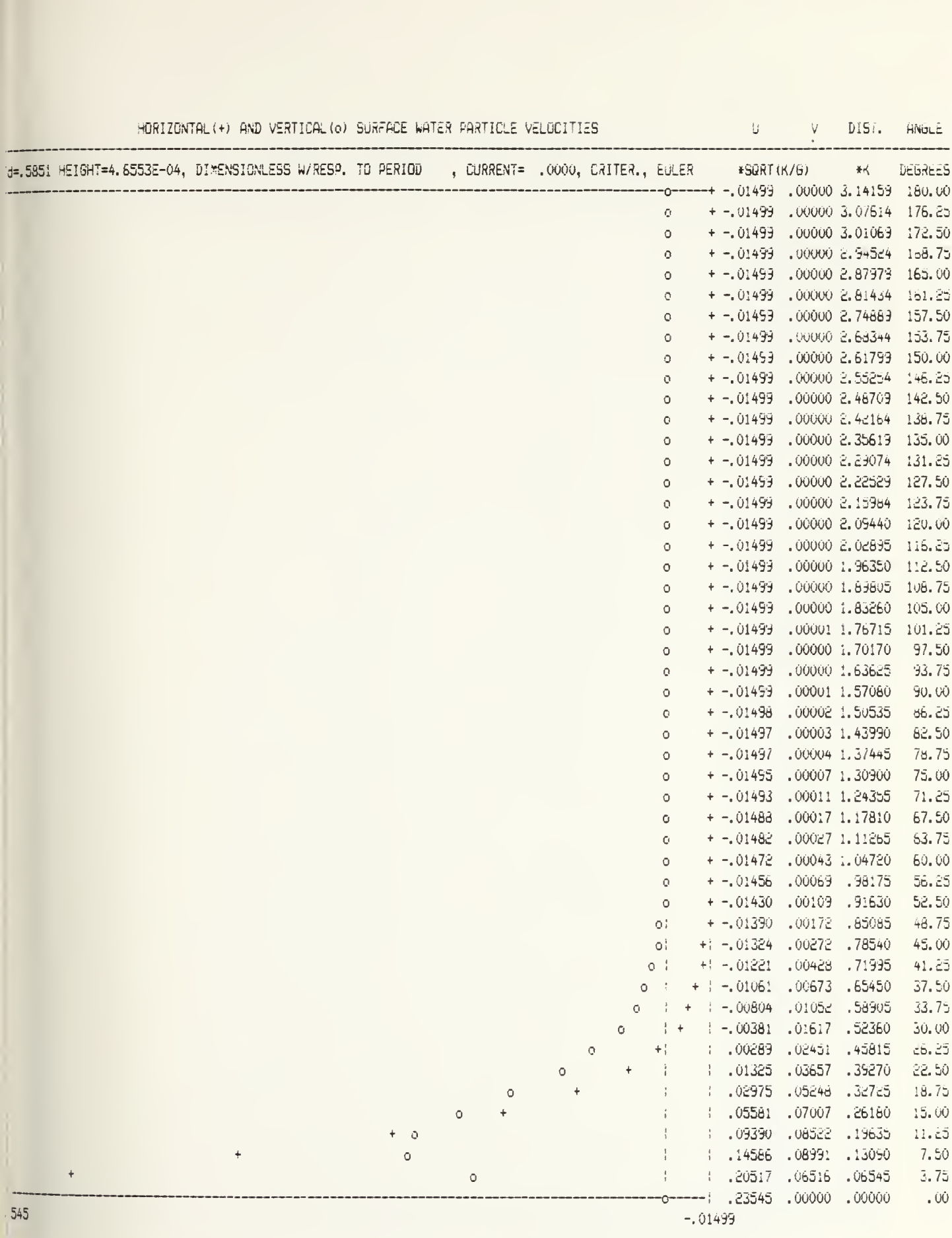
LUTION VS DEPTH, THETA=180.00 DEGREES, KX= 3.1416 RADIANS, H/d= .5851, WAVE HEIGHT=4.65528E-04 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
-.00635	-.01499	.00000	.00000	.00000	.00000	-.0002248	.0000000	-.0000321	.0000000	.0000000	.0000000	.0000000	.0000000
-.01230	-.01499	.00000	.00000	.00000	.00595	-.0002248	.0000000	-.0000308	.0000000	-.0000013	.0000000	-.0000002	.0000000
-.01825	-.01499	.00000	.00000	.00000	.01191	-.0002248	.0000000	-.0000294	.0000000	-.0000027	.0000000	-.0000004	.0000000
-.02420	-.01499	.00000	.00000	.00000	.01786	-.0002248	.0000000	-.0000281	.0000000	-.0000040	.0000000	-.0000005	.0000000
-.03016	-.01499	.00000	.00000	.00000	.02381	-.0002248	.0000000	-.0000268	.0000000	-.0000054	.0000000	-.0000007	.0000000
-.03611	-.01499	.00000	.00000	.00000	.02976	-.0002248	.0000000	-.0000254	.0000000	-.0000067	.0000000	-.0000009	.0000000
-.04206	-.01499	.00000	.00000	.00000	.03572	-.0002248	.0000000	-.0000241	.0000000	-.0000080	.0000000	-.0000010	.0000000
-.04801	-.01499	.00000	.00000	.00000	.04167	-.0002248	.0000000	-.0000227	.0000000	-.0000094	.0000000	-.0000011	.0000000
-.05397	-.01499	.00000	.00000	.00000	.04762	-.0002248	.0000000	-.0000214	.0000000	-.0000107	.0000000	-.0000013	.0000000
-.05992	-.01499	.00000	.00000	.00000	.05357	-.0002248	.0000000	-.0000201	.0000000	-.0000120	.0000000	-.0000014	.0000000
-.06587	-.01499	.00000	.00000	.00000	.05953	-.0002248	.0000000	-.0000187	.0000000	-.0000134	.0000000	-.0000015	.0000000
-.07183	-.01499	.00000	.00000	.00000	.06548	-.0002248	.0000000	-.0000174	.0000000	-.0000147	.0000000	-.0000016	.0000000
-.07778	-.01499	.00000	.00000	.00000	.07143	-.0002248	.0000000	-.0000161	.0000000	-.0000161	.0000000	-.0000017	.0000000
-.08373	-.01499	.00000	.00000	.00000	.07738	-.0002248	.0000000	-.0000147	.0000000	-.0000174	.0000000	-.0000018	.0000000
-.08968	-.01499	.00000	.00000	.00000	.08334	-.0002248	.0000000	-.0000134	.0000000	-.0000187	.0000000	-.0000019	.0000000
-.09564	-.01499	.00000	.00000	.00000	.08929	-.0002248	.0000000	-.0000120	.0000000	-.0000201	.0000000	-.0000020	.0000000
-.10159	-.01499	.00000	.00000	.00000	.09524	-.0002248	.0000000	-.0000107	.0000000	-.0000214	.0000000	-.0000020	.0000000
-.10754	-.01499	.00000	.00000	.00000	.10119	-.0002248	.0000000	-.0000094	.0000000	-.0000227	.0000000	-.0000021	.0000000
-.11349	-.01499	.00000	.00000	.00000	.10715	-.0002248	.0000000	-.0000080	.0000000	-.0000241	.0000000	-.0000022	.0000000
-.11945	-.01499	.00000	.00000	.00000	.11310	-.0002248	.0000000	-.0000067	.0000000	-.0000254	.0000000	-.0000022	.0000000
-.12540	-.01499	.00000	.00000	.00000	.11905	-.0002248	.0000000	-.0000054	.0000000	-.0000268	.0000000	-.0000022	.0000000
-.13135	-.01499	.00000	.00000	.00000	.12500	-.0002248	.0000000	-.0000040	.0000000	-.0000281	.0000000	-.0000023	.0000000
-.13730	-.01499	.00000	.00000	.00000	.13096	-.0002248	.0000000	-.0000027	.0000000	-.0000294	.0000000	-.0000023	.0000000
-.14326	-.01499	.00000	.00000	.00000	.13691	-.0002248	.0000000	-.0000013	.0000000	-.0000308	.0000000	-.0000023	.0000000
-.14921	-.01499	.00000	.00000	.00000	.14286	-.0002248	.0000000	.0000000	.0000000	-.0000321	.0000000	-.0000023	.0000000

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

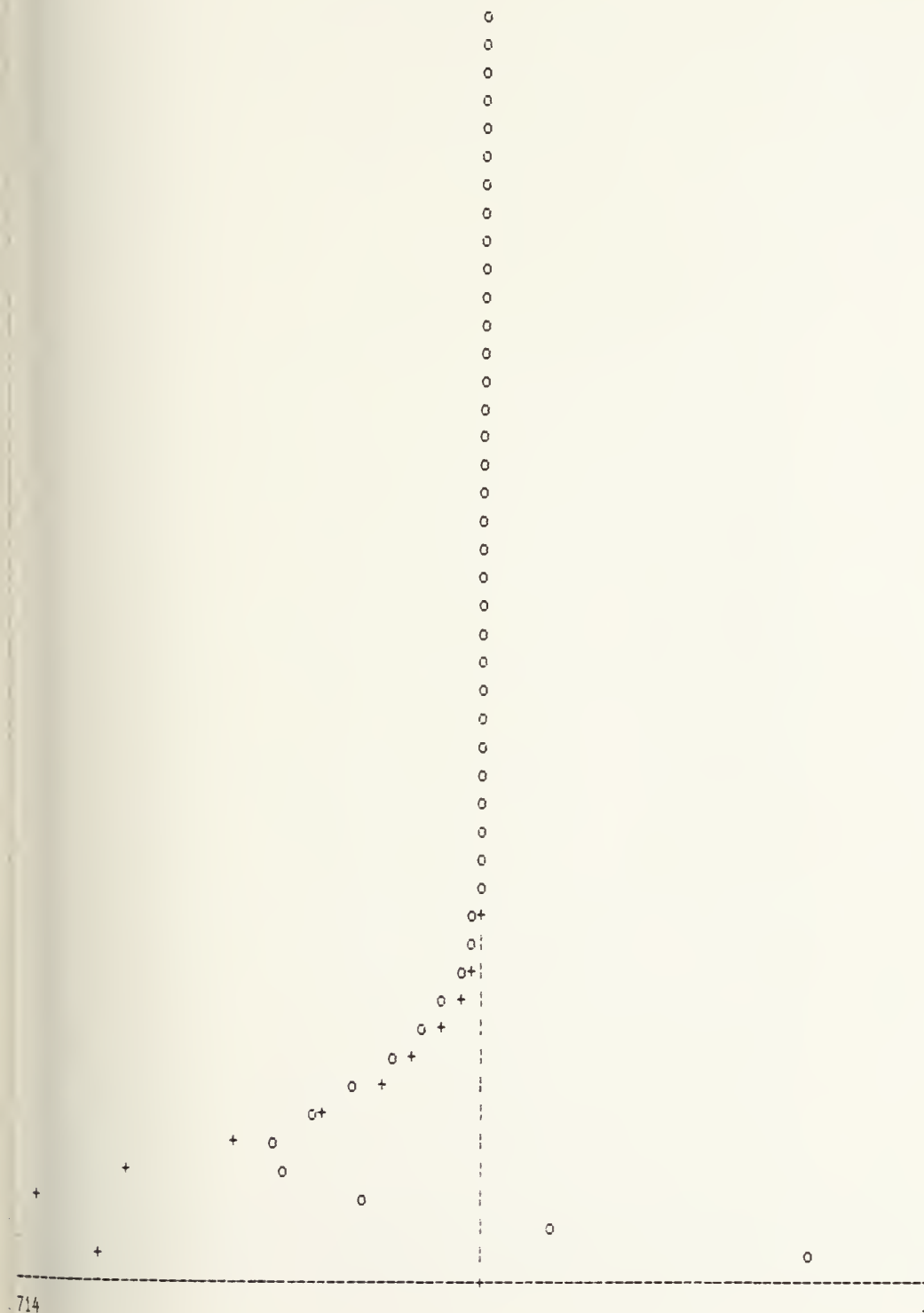
d=.5851 HEIGHT=4.6553E-04, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.01499	.00000	3.14159	180.00
-.01499	.00000	3.07614	176.25
-.01499	.00000	3.01069	172.50
-.01499	.00000	2.94524	168.75
-.01499	.00000	2.87979	165.00
-.01499	.00000	2.81434	161.25
-.01499	.00000	2.74889	157.50
-.01499	.00000	2.68344	153.75
-.01499	.00000	2.61799	150.00
-.01499	.00000	2.55254	146.25
-.01499	.00000	2.48709	142.50
-.01499	.00000	2.42164	138.75
-.01499	.00000	2.35619	135.00
-.01499	.00000	2.29074	131.25
-.01499	.00000	2.22529	127.50
-.01499	.00000	2.15984	123.75
-.01499	.00000	2.09440	120.00
-.01499	.00000	2.02895	116.25
-.01499	.00000	1.96350	112.50
-.01499	.00000	1.89805	108.75
-.01499	.00000	1.83260	105.00
-.01499	.00001	1.76715	101.25
-.01499	.00000	1.70170	97.50
-.01499	.00000	1.63625	93.75
-.01499	.00001	1.57080	90.00
-.01498	.00002	1.50535	86.25
-.01497	.00003	1.43990	82.50
-.01497	.00004	1.37445	78.75
-.01495	.00007	1.30900	75.00
-.01493	.00011	1.24355	71.25
-.01488	.00017	1.17810	67.50
-.01482	.00027	1.11265	63.75
-.01472	.00043	1.04720	60.00
-.01456	.00069	.98175	56.25
-.01430	.00109	.91630	52.50
-.01390	.00172	.85085	48.75
-.01324	.00272	.78540	45.00
-.01221	.00428	.71995	41.25
-.01061	.00673	.65450	37.50
-.00804	.01052	.58905	33.75
-.00381	.01617	.52360	30.00
.00289	.02451	.45815	26.25
.01325	.03657	.39270	22.50
.02975	.05248	.32725	18.75
.05581	.07007	.26180	15.00
.09390	.08522	.19635	11.25
.14586	.08991	.13090	7.50
.20517	.06516	.06545	3.75
.23545	.00000	.00000	.00



HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

d=.5851 HEIGHT=4.6553E-04, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



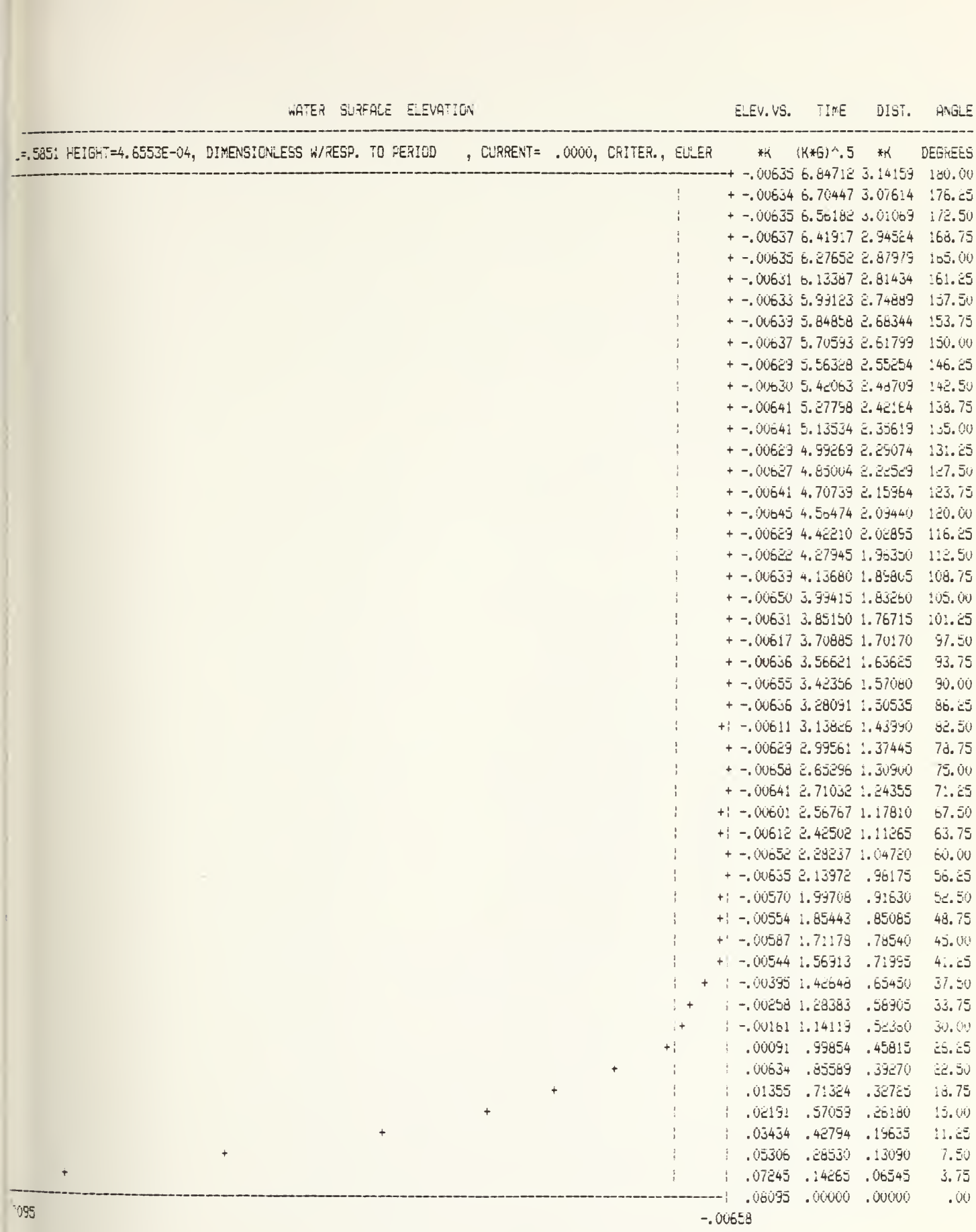
Ax *1/G	Ay *1/G	DIST. *K	ANGLE DEGREES
.00000	.00000	3.14159	180.00
.00000	.00000	3.07614	176.25
.00000	.00000	3.01069	172.50
.00000	.00000	2.94524	168.75
.00000	.00000	2.87979	165.00
.00000	-.00001	2.81434	161.25
-.00001	.00000	2.74889	157.50
.00000	.00001	2.68344	153.75
.00001	.00001	2.61799	150.00
.00001	-.00001	2.55254	146.25
-.00001	-.00001	2.48709	142.50
-.00001	.00001	2.42164	138.75
.00001	.00001	2.35619	135.00
.00001	-.00001	2.29074	131.25
-.00001	-.00001	2.22529	127.50
-.00002	.00001	2.15984	123.75
.00001	.00002	2.09440	120.00
.00002	-.00001	2.02895	116.25
-.00001	-.00002	1.96350	112.50
-.00002	.00001	1.89805	108.75
.00001	.00003	1.83260	105.00
.00003	.00000	1.76715	101.25
.00001	-.00001	1.70170	97.50
-.00001	.00002	1.63625	93.75
.00002	.00007	1.57080	90.00
.00007	.00006	1.50535	86.25
.00006	.00006	1.43990	82.50
.00006	.00014	1.37445	78.75
.00014	.00026	1.30900	75.00
.00026	.00037	1.24355	71.25
.00037	.00055	1.17810	67.50
.00055	.00090	1.11265	63.75
.00091	.00146	1.04720	60.00
.00148	.00229	.98175	56.25
.00230	.00361	.91630	52.50
.00364	.00570	.85085	48.75
.00584	.00893	.78540	45.00
.00925	.01392	.71995	41.25
.01455	.02165	.65450	37.50
.02312	.03308	.58905	33.75
.03689	.04881	.52360	30.00
.05793	.06955	.45815	26.25
.08939	.09429	.39270	22.50
.13538	.11446	.32725	18.75
.19361	.11111	.26180	15.00
.24977	.06521	.19635	11.25
.27714	-.03581	.13090	7.50
.21040	-.17867	.06545	3.75
.00000	-.25818	.00000	.00

.714

-.25818

WATER SURFACE ELEVATION

.=.5851 HEIGHT=4.6553E-04, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



ELEV. VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.00635	6.84712	3.14159	180.00
-.00634	6.70447	3.07614	176.25
-.00635	6.56182	3.01069	172.50
-.00637	6.41917	2.94524	168.75
-.00635	6.27652	2.87979	165.00
-.00631	6.13387	2.81434	161.25
-.00633	5.99123	2.74889	157.50
-.00639	5.84858	2.68344	153.75
-.00637	5.70593	2.61799	150.00
-.00629	5.56328	2.55254	146.25
-.00630	5.42063	2.48709	142.50
-.00641	5.27798	2.42164	138.75
-.00641	5.13534	2.35619	135.00
-.00629	4.99269	2.29074	131.25
-.00627	4.85004	2.22529	127.50
-.00641	4.70739	2.15984	123.75
-.00645	4.56474	2.09440	120.00
-.00629	4.42210	2.02895	116.25
-.00622	4.27945	1.96350	112.50
-.00639	4.13680	1.89805	108.75
-.00650	3.99415	1.83260	105.00
-.00631	3.85150	1.76715	101.25
-.00617	3.70885	1.70170	97.50
-.00636	3.56621	1.63625	93.75
-.00655	3.42356	1.57080	90.00
-.00636	3.28091	1.50535	86.25
-.00611	3.13826	1.43990	82.50
-.00629	2.99561	1.37445	78.75
-.00658	2.85296	1.30900	75.00
-.00641	2.71032	1.24355	71.25
-.00601	2.56767	1.17810	67.50
-.00612	2.42502	1.11265	63.75
-.00652	2.28237	1.04720	60.00
-.00635	2.13972	.98175	56.25
-.00570	1.99708	.91630	52.50
-.00554	1.85443	.85085	48.75
-.00587	1.71178	.78540	45.00
-.00544	1.56913	.71995	41.25
-.00395	1.42648	.65450	37.50
-.00258	1.28383	.58905	33.75
-.00161	1.14119	.52360	30.00
.00091	.99854	.45815	26.25
.00634	.85589	.39270	22.50
.01355	.71324	.32725	18.75
.02191	.57059	.26180	15.00
.03434	.42794	.19635	11.25
.05306	.28530	.13090	7.50
.07245	.14265	.06545	3.75
.08095	.00000	.00000	.00

4C, SHALLOW
W/ CURRENT

M. M. RIENECKER AND J. D. FENTON.

DEPTH: FINITE, HEIGHT/DEPTH= .5839

WAVE HEIGHT 1.858611E-03, DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .00

SOLUTION OF ORDER 8 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

WATER DEPTH	.31319
WAVE HEIGHT	.18287
WAVE PERIOD	9.9193
WAVE SPEED	.63343
MEAN EULERIAN FLUID SPEED	2.09000E-22
MEAN MASS TRANSPORT SPEED	1.34673E-02
MEAN FLUID SPEED RELATIVE TO WAVE	.63343
VOLUME FLUX DUE TO WAVES	4.21777E-03
BERNOULLI CONSTANT	.20262

SOLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .5839, WAVE HEIGHT=1.858611E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.15675	.33052	.00000	.00000	-.26811	.00000	.1092432	.0000000	.0513368	.0000000	.0000000	.0000000	.0000000	.0000000
.13716	.31396	.00000	.00000	-.25796	.01443	.0985715	.0000000	.0443917	.0000000	.0020346	.0000000	.0009372	.0000000
.11758	.29885	.00000	.00000	-.24651	.02907	.0893134	.0000000	.0384735	.0000000	.0038740	.0000000	.0017485	.0000000
.09800	.28507	.00000	.00000	-.23420	.04394	.0812637	.0000000	.0334148	.0000000	.0055440	.0000000	.0024523	.0000000
.07842	.27249	.00000	.00000	-.22139	.05906	.0742506	.0000000	.0290772	.0000000	.0070665	.0000000	.0030641	.0000000
.05884	.26102	.00000	.00000	-.20832	.07443	.0681294	.0000000	.0253461	.0000000	.0084604	.0000000	.0035969	.0000000
.03926	.25056	.00000	.00000	-.19519	.09006	.0627781	.0000000	.0221250	.0000000	.0097420	.0000000	.0040617	.0000000
.01968	.24103	.00000	.00000	-.18214	.10595	.0580938	.0000000	.0193375	.0000000	.0109254	.0000000	.0044676	.0000000
.00010	.23235	.00000	.00000	-.16927	.12209	.0539993	.0000000	.0169142	.0000000	.0120227	.0000000	.0048225	.0000000
-.01948	.22448	.00000	.00000	-.15664	.13848	.0503908	.0000000	.0148001	.0000000	.0130446	.0000000	.0051330	.0000000
-.03906	.21734	.00000	.00000	-.14431	.15512	.0472357	.0000000	.0129486	.0000000	.0140004	.0000000	.0054047	.0000000
-.05864	.21093	.00000	.00000	-.13230	.17199	.0444706	.0000000	.0113198	.0000000	.0148983	.0000000	.0056423	.0000000
-.07822	.20506	.00000	.00000	-.12062	.18909	.0420504	.0000000	.0098804	.0000000	.0157453	.0000000	.0058498	.0000000
-.09780	.19984	.00000	.00000	-.10926	.20642	.0399365	.0000000	.0086017	.0000000	.0165480	.0000000	.0060308	.0000000
-.11738	.19518	.00000	.00000	-.09822	.22397	.0380962	.0000000	.0074594	.0000000	.0173119	.0000000	.0061880	.0000000
-.13696	.19105	.00000	.00000	-.08749	.24174	.0365017	.0000000	.0064325	.0000000	.0180423	.0000000	.0063240	.0000000
-.15654	.18743	.00000	.00000	-.07703	.25971	.0351297	.0000000	.0055029	.0000000	.0187435	.0000000	.0064409	.0000000
-.17612	.18429	.00000	.00000	-.06682	.27788	.0339605	.0000000	.0046547	.0000000	.0194200	.0000000	.0065403	.0000000
-.19570	.18160	.00000	.00000	-.05685	.29625	.0329774	.0000000	.0038743	.0000000	.0200753	.0000000	.0066238	.0000000
-.21528	.17935	.00000	.00000	-.04707	.31481	.0321670	.0000000	.0031492	.0000000	.0207131	.0000000	.0066926	.0000000
-.23486	.17753	.00000	.00000	-.03745	.33357	.0315181	.0000000	.0024686	.0000000	.0213366	.0000000	.0067475	.0000000
-.25444	.17613	.00000	.00000	-.02797	.35251	.0310222	.0000000	.0018223	.0000000	.0219489	.0000000	.0067895	.0000000
-.27402	.17514	.00000	.00000	-.01859	.37163	.0306725	.0000000	.0012012	.0000000	.0225529	.0000000	.0068192	.0000000
-.29361	.17454	.00000	.00000	-.00928	.39094	.0304645	.0000000	.0005965	.0000000	.0231514	.0000000	.0068368	.0000000
-.31319	.17434	.00000	.00000	.00000	.41043	.0303955	.0000000	.0000000	.0000000	.0237472	.0000000	.0068426	.0000000

OLUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

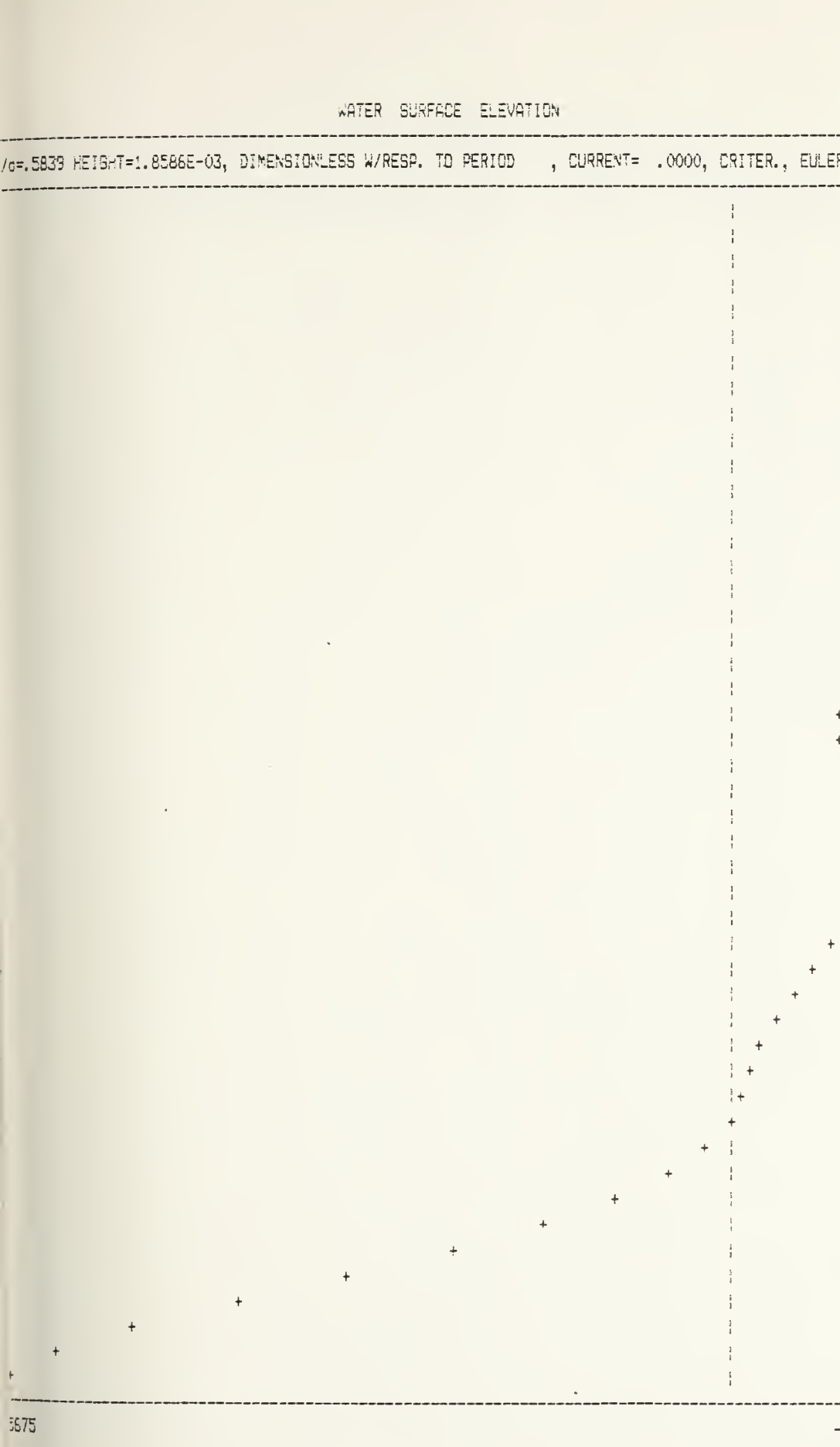
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.10210	.19368	.14067	.30898	-.03191	-.00706	.0375105	.3089848	.0156149	.1286248	.0000000	.0000000	.0000000	.0000000
.08575	.18912	.13035	.28821	-.03260	.00967	.0357679	.2882066	.0142691	.1149763	.0006355	.0051792	.0002592	.0021126
.06841	.18482	.12074	.26915	-.04355	.02630	.0341586	.2691529	.0130346	.1027066	.0012420	.0100129	.0004960	.0040005
.05106	.18076	.11177	.25169	-.04703	.04286	.0326737	.2516937	.0119013	.0916786	.0018216	.0145300	.0007122	.0056863
.03372	.17693	.10338	.23571	-.04928	.05937	.0313051	.2357092	.0108598	.0817679	.0023764	.0187570	.0009096	.0071905
.01637	.17334	.09552	.22109	-.05050	.07585	.0300453	.2210893	.0099016	.0728614	.0029085	.0227186	.0010897	.0085316
-.00097	.16996	.08814	.20773	-.05085	.09231	.0288873	.2077321	.0090189	.0648567	.0034196	.0264376	.0012538	.0097259
-.01832	.16681	.08120	.19555	-.05048	.10878	.0278245	.1955481	.0082045	.0576606	.0039114	.0299350	.0014031	.0107885
-.03566	.16386	.07465	.18445	-.04950	.12525	.0268510	.1844501	.0074517	.0511888	.0043856	.0332306	.0015389	.0117325
-.05301	.16112	.06847	.17435	-.04802	.14173	.0259612	.1743622	.0067545	.0453549	.0048436	.0363424	.0016621	.0125698
-.07035	.15859	.06260	.16521	-.04611	.15820	.0251503	.1652148	.0061073	.0401193	.0052869	.0392874	.0017737	.0133112
-.08770	.15625	.05703	.15694	-.04385	.17484	.0244135	.1569448	.0055049	.0353889	.0057167	.0420813	.0018744	.0139661
-.10504	.15410	.05172	.14950	-.04129	.19145	.0237468	.1494951	.0049427	.0311161	.0061344	.0447390	.0019650	.0145428
-.12239	.15214	.04664	.14281	-.03849	.20810	.0231463	.1428147	.0044162	.0272485	.0065411	.0472740	.0020461	.0150490
-.13974	.15036	.04178	.13686	-.03548	.22481	.0226088	.1368577	.0039215	.0237381	.0069379	.0496995	.0021185	.0154912
-.15708	.14877	.03710	.13158	-.03231	.24156	.0221311	.1315834	.0034549	.0205409	.0073259	.0520275	.0021824	.0158752
-.17443	.14735	.03258	.12696	-.02901	.25838	.0217106	.1269559	.0030126	.0176165	.0077061	.0542698	.0022385	.0162061
-.19177	.14610	.02821	.12294	-.02559	.27525	.0213449	.1229437	.0025916	.0149273	.0080795	.0564370	.0022871	.0164883
-.20912	.14502	.02396	.11952	-.02208	.29218	.0210319	.1195196	.0021888	.0124385	.0084470	.0585398	.0023286	.0167257
-.22646	.14412	.01981	.11668	-.01850	.30917	.0207701	.1166605	.0018013	.0101174	.0088096	.0605881	.0023632	.0169213
-.24381	.14338	.01575	.11435	-.01486	.32623	.0205578	.1143470	.0014263	.0079334	.0091680	.0625915	.0023912	.0170778
-.26115	.14281	.01175	.11256	-.01118	.34335	.0203938	.1125635	.0010612	.0058573	.0095231	.0645594	.0024127	.0171974
-.27850	.14240	.00781	.11130	-.00747	.36053	.0202774	.1112981	.0007034	.0038609	.0098755	.0665008	.0024280	.0172817
-.29584	.14215	.00390	.11054	-.00374	.37778	.0202078	.1105422	.0003505	.0019174	.0102270	.0684248	.0024373	.0173319
-.31319	.14207	.00000	.11029	.00000	.39509	.0201846	.1102908	.0000000	.0000000	.0105773	.0703399	.0024402	.0173485

OLUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.02383	.05627	.10069	.20231	.12340	.00716	.0031658	.2023144	.0010689	.0681829	.0000000	.0000000	.0000000	.0000000
.00979	.05825	.09547	.19801	.11247	.02286	.0033930	.1980134	.0010959	.0639528	.0000461	.0028108	.0000152	.0009277
-.00426	.06005	.09039	.19382	.10245	.03841	.0036064	.1938195	.0011141	.0598756	.0000952	.0055819	.0000307	.0017972
-.01830	.06169	.08543	.18975	.09325	.05383	.0038057	.1897500	.0011223	.0559550	.0001472	.0082550	.0000464	.0026104
-.03224	.06318	.08060	.18582	.08482	.06912	.0039912	.1858199	.0011209	.0521867	.0002020	.0108919	.0000622	.0033697
-.04638	.06452	.07588	.18204	.07707	.08430	.0041630	.1820415	.0011107	.0485693	.0002592	.0134747	.0000778	.0040771
-.06042	.06574	.07127	.17843	.06994	.09937	.0043217	.1784250	.0010924	.0450989	.0003188	.0160055	.0000933	.0047348
-.07447	.06684	.06676	.17498	.06338	.11435	.0044675	.1749790	.0010665	.0417707	.0003805	.0184869	.0001084	.0053447
-.08851	.06783	.06235	.17171	.05734	.12924	.0046014	.1717104	.0010338	.0385793	.0004442	.0209210	.0001232	.0059089
-.10255	.06873	.05802	.16862	.05177	.14405	.0047235	.1686250	.0009949	.0355182	.0005097	.0233106	.0001374	.0064291
-.11659	.06953	.05379	.16573	.04661	.15878	.0048346	.1657273	.0009504	.0325806	.0005768	.0256581	.0001511	.0069072
-.13064	.07025	.04962	.16302	.04184	.17344	.0049351	.1630210	.0009009	.0297594	.0006454	.0279663	.0001641	.0073449
-.14468	.07089	.04553	.16051	.03741	.18804	.0050258	.1605090	.0008469	.0270469	.0007153	.0302378	.0001764	.0077439
-.15872	.07146	.04151	.15819	.03329	.20258	.0051071	.1581935	.0007889	.0244354	.0007864	.0324755	.0001879	.0081052
-.17276	.07197	.03755	.15608	.02945	.21706	.0051795	.1560764	.0007273	.0219167	.0008587	.0346820	.0001985	.0084307
-.18681	.07241	.03364	.15416	.02585	.23149	.0052435	.1541588	.0006627	.0194827	.0009318	.0368602	.0002083	.0087214
-.20085	.07280	.02978	.15244	.02246	.24587	.0052995	.1524417	.0005953	.0171250	.0010059	.0390129	.0002171	.0089784
-.21489	.07313	.02596	.15093	.01928	.26021	.0053480	.1509258	.0005257	.0148354	.0010806	.0411429	.0002250	.0092028
-.22893	.07341	.02218	.14961	.01632	.27450	.0053894	.1496115	.0004541	.0126053	.0011560	.0432530	.0002318	.0093955
-.24297	.07365	.01844	.14850	.01331	.28875	.0054238	.1484992	.0003808	.0104263	.0012319	.0453461	.0002377	.0095572
-.25702	.07383	.01472	.14759	.01052	.30296	.0054516	.1475890	.0003062	.0082899	.0013083	.0474250	.0002425	.0096885
-.27106	.07398	.01102	.14688	.00781	.31713	.0054730	.1468810	.0002306	.0061876	.0013850	.0494925	.0002463	.0097902
-.28510	.07408	.00734	.14638	.00517	.33126	.0054882	.1463753	.0001541	.0041109	.0014620	.0515515	.0002490	.0098625
-.29914	.07414	.00367	.14607	.00257	.34536	.0054972	.1460718	.0000772	.0020512	.0015391	.0536048	.0002506	.0099058
-.31319	.07416	.00000	.14597	.00000	.35943	.0055002	.1459707	.0000000	.0000000	.0016163	.0556552	.0002513	.0099203

WATER SURFACE ELEVATION

/c=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



ELEV.VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.02513	4.95963	3.14159	180.00
-.02618	4.85631	3.07614	176.25
-.02630	4.75298	3.01069	172.50
-.02642	4.64965	2.94524	168.75
-.02645	4.54633	2.87979	165.00
-.02635	4.44300	2.81434	161.25
-.02608	4.33968	2.74889	157.50
-.02571	4.23635	2.68344	153.75
-.02535	4.13303	2.61799	150.00
-.02512	4.02970	2.55254	146.25
-.02515	3.92637	2.48709	142.50
-.02547	3.82305	2.42164	138.75
-.02604	3.71972	2.35619	135.00
-.02672	3.61640	2.29074	131.25
-.02731	3.51307	2.22529	127.50
-.02759	3.40975	2.15984	123.75
-.02742	3.30642	2.09440	120.00
-.02676	3.20310	2.02895	116.25
-.02571	3.09977	1.96350	112.50
-.02450	2.99644	1.89805	108.75
-.02343	2.89312	1.83260	105.00
-.02280	2.78979	1.76715	101.25
-.02280	2.68647	1.70170	97.50
-.02345	2.58314	1.63625	93.75
-.02455	2.47982	1.57080	90.00
-.02576	2.37649	1.50535	86.25
-.02659	2.27316	1.43990	82.50
-.02660	2.16984	1.37445	78.75
-.02547	2.06651	1.30900	75.00
-.02313	1.96319	1.24355	71.25
-.01977	1.85986	1.17810	67.50
-.01581	1.75654	1.11265	63.75
-.01182	1.65321	1.04720	60.00
-.00831	1.54988	.98175	56.25
-.00557	1.44656	.91630	52.50
-.00353	1.34323	.85085	48.75
-.00170	1.23991	.78540	45.00
.00084	1.13658	.71995	41.25
.00521	1.03326	.65450	37.50
.01258	.92993	.58905	33.75
.02383	.82661	.52360	30.00
.03928	.72328	.45815	26.25
.05853	.61995	.39270	22.50
.08043	.51663	.32725	18.75
.10310	.41330	.26180	15.00
.12425	.30998	.19635	11.25
.14151	.20665	.13090	7.50
.15281	.10333	.06545	3.75
.15675	.00000	.00000	.00

5675 -.02759

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

H/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

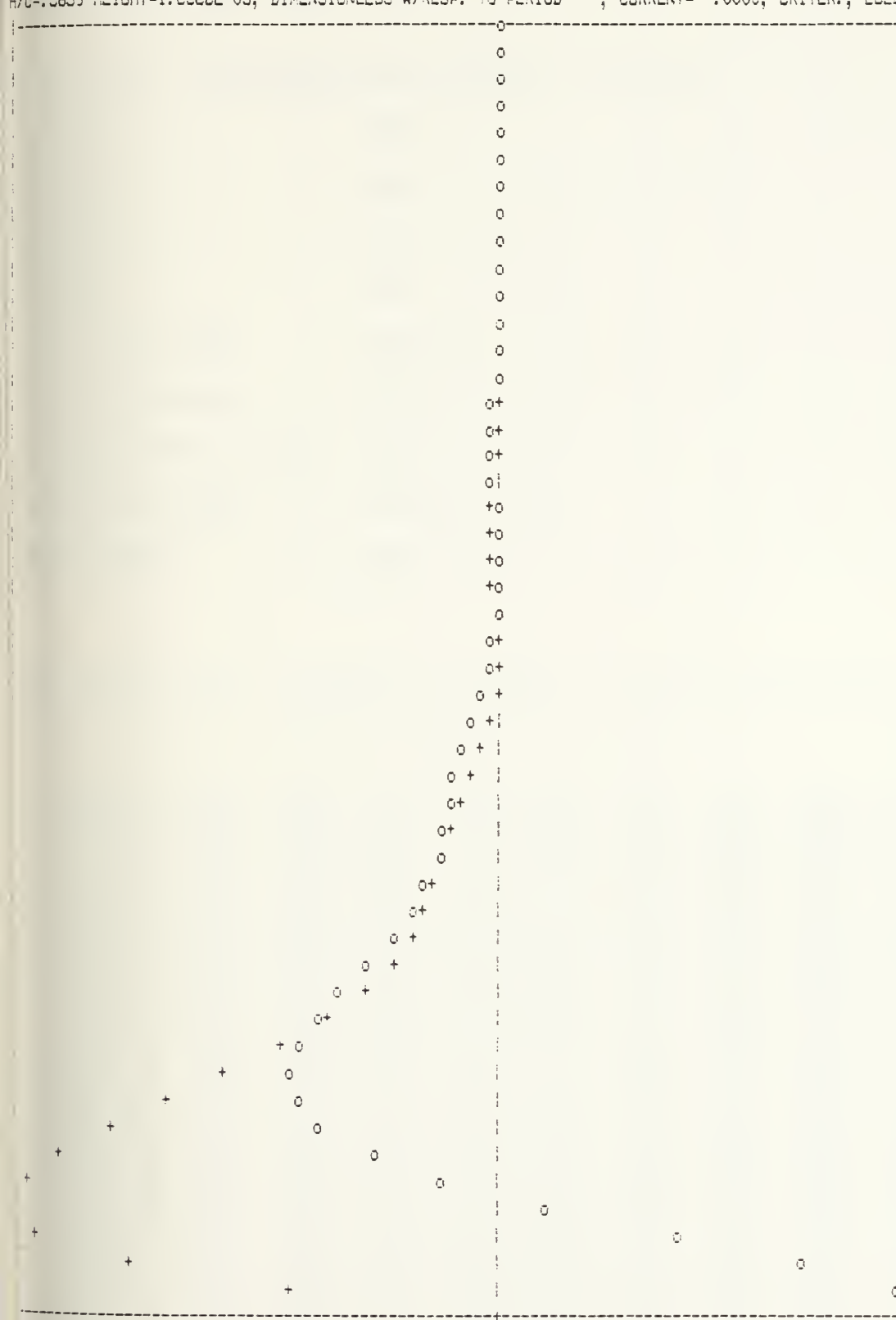
U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.04296	.00000	3.14159	180.00
-.04297	-.00002	3.07614	176.25
-.04301	-.00001	3.01069	172.50
-.04304	.00004	2.94524	168.75
-.04304	.00012	2.87979	165.00
-.04299	.00022	2.81434	161.25
-.04288	.00029	2.74889	157.50
-.04274	.00030	2.68344	153.75
-.04260	.00023	2.61799	150.00
-.04252	.00010	2.55254	146.25
-.04252	-.00007	2.48709	142.50
-.04263	-.00020	2.42164	138.75
-.04283	-.00024	2.35619	135.00
-.04305	-.00014	2.29074	131.25
-.04321	.00012	2.22529	127.50
-.04326	.00049	2.15984	123.75
-.04312	.00093	2.09440	120.00
-.04280	.00135	2.02895	116.25
-.04233	.00168	1.96350	112.50
-.04179	.00186	1.89805	108.75
-.04127	.00191	1.83260	105.00
-.04089	.00189	1.76715	101.25
-.04068	.00192	1.70170	97.50
-.04062	.00217	1.63625	93.75
-.04062	.00278	1.57080	90.00
-.04050	.00386	1.50535	86.25
-.04009	.00544	1.43990	82.50
-.03923	.00750	1.37445	78.75
-.03783	.00998	1.30900	75.00
-.03585	.01284	1.24355	71.25
-.03329	.01606	1.17810	67.50
-.03020	.01967	1.11265	63.75
-.02662	.02380	1.04720	60.00
-.02250	.02866	.98175	56.25
-.01762	.03457	.91630	52.50
-.01159	.04183	.85085	48.75
-.00381	.05064	.78540	45.00
.00632	.06105	.71995	41.25
.01937	.07301	.65450	37.50
.03583	.08632	.58905	33.75
.05627	.10069	.52360	30.00
.08144	.11543	.45815	26.25
.11236	.12907	.39270	22.50
.14985	.13888	.32725	18.75
.19368	.14067	.26180	15.00
.24109	.12940	.19635	11.25
.28573	.10112	.13090	7.50
.31842	.05595	.06545	3.75
.33052	.00000	.00000	.00

3052

-.04326

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

H/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax *1/G	Ay *1/G	DIST. *K	ANGLE DEGREES
.00000	-.00023	3.14159	180.00
-.00031	-.00009	3.07614	176.25
-.00042	.00029	3.01069	172.50
-.00024	.00071	2.94524	168.75
.00024	.00097	2.87979	165.00
.00085	.00091	2.81434	161.25
.00136	.00046	2.74889	157.50
.00154	-.00028	2.68344	153.75
.00124	-.00108	2.61799	150.00
.00046	-.00162	2.55254	146.25
-.00062	-.00165	2.48709	142.50
-.00165	-.00100	2.42164	138.75
-.00225	.00025	2.35619	135.00
-.00215	.00182	2.29074	131.25
-.00121	.00332	2.22529	127.50
.00042	.00433	2.15984	123.75
.00239	.00457	2.09440	120.00
.00422	.00393	2.02895	116.25
.00544	.00262	1.96350	112.50
.00566	.00106	1.89805	108.75
.00479	-.00012	1.83260	105.00
.00311	-.00024	1.76715	101.25
.00123	.00117	1.70170	97.50
-.00002	.00423	1.63625	93.75
.00013	.00862	1.57080	90.00
.00212	.01374	1.50535	86.25
.00600	.01885	1.43990	82.50
.01139	.02345	1.37445	78.75
.01765	.02727	1.30900	75.00
.02405	.03049	1.24355	71.25
.02994	.03365	1.17810	67.50
.03503	.03775	1.11265	63.75
.03961	.04393	1.04720	60.00
.04479	.05323	.98175	56.25
.05233	.06602	.91630	52.50
.06419	.08155	.85085	48.75
.08177	.09799	.78540	45.00
.10539	.11282	.71995	41.25
.13427	.12349	.65450	37.50
.16708	.12774	.58905	33.75
.20231	.12340	.52360	30.00
.23830	.10799	.45815	26.25
.27230	.07853	.39270	22.50
.29898	.03214	.32725	18.75
.30898	-.03131	.26180	15.00
.28972	-.10904	.19635	11.25
.23006	-.18671	.13090	7.50
.12864	-.24584	.06545	3.75
.00000	-.26811	.00000	.00

.30898 -.26811

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

DEPTH: FINITE, HEIGHT/DEPTH= .5839

WAVE HEIGHT 1.858611E-03, DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .00

SOLUTION OF ORDER 9 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

WATER DEPTH	.31338
WAVE HEIGHT	.18299
WAVE PERIOD	9.9224
WAVE SPEED	.63323
MEAN EULERIAN FLUID SPEED	4.58366E-22
MEAN MASS TRANSPORT SPEED	1.32644E-02
MEAN FLUID SPEED RELATIVE TO WAVE	.63323
VOLUME FLUX DUE TO WAVES	4.15683E-03
BERNOULLI CONSTANT	.20260

SOLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/c= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.15689	.33088	.00000	.00000	-.27069	.00000	.1094840	.0000000	.0514871	.0000000	.0000000	.0000000	.0000000	.0000000
.13729	.31414	.00000	.00000	-.26010	.01439	.0986836	.0000000	.0444743	.0000000	.0020395	.0000000	.0009402	.0000000
.11770	.29989	.00000	.00000	-.24822	.02900	.0893359	.0000000	.0385110	.0000000	.0038816	.0000000	.0017532	.0000000
.09810	.28500	.00000	.00000	-.23553	.04386	.0812257	.0000000	.0334233	.0000000	.0055526	.0000000	.0024580	.0000000
.07851	.27235	.00000	.00000	-.22236	.05897	.0741730	.0000000	.0290678	.0000000	.0070751	.0000000	.0030702	.0000000
.05892	.26082	.00000	.00000	-.20899	.07433	.0680273	.0000000	.0253264	.0000000	.0084683	.0000000	.0036031	.0000000
.03932	.25032	.00000	.00000	-.19561	.08997	.0626825	.0000000	.0221012	.0000000	.0097487	.0000000	.0040678	.0000000
.01973	.24077	.00000	.00000	-.18235	.10586	.0579722	.0000000	.0193110	.0000000	.0109306	.0000000	.0044735	.0000000
.00013	.23209	.00000	.00000	-.16931	.12201	.0538670	.0000000	.0168880	.0000000	.0120263	.0000000	.0048292	.0000000
-.01946	.22421	.00000	.00000	-.15655	.13841	.0502714	.0000000	.0147757	.0000000	.0130466	.0000000	.0051384	.0000000
-.03906	.21707	.00000	.00000	-.14412	.15506	.0471213	.0000000	.0129265	.0000000	.0140008	.0000000	.0054098	.0000000
-.05865	.21062	.00000	.00000	-.13204	.17195	.0443626	.0000000	.0113005	.0000000	.0148971	.0000000	.0056471	.0000000
-.07825	.20482	.00000	.00000	-.12031	.18907	.0419494	.0000000	.0098638	.0000000	.0157427	.0000000	.0058545	.0000000
-.09784	.19961	.00000	.00000	-.10892	.20642	.0398427	.0000000	.0085877	.0000000	.0165440	.0000000	.0060353	.0000000
-.11744	.19496	.00000	.00000	-.09788	.22399	.0380094	.0000000	.0074478	.0000000	.0173068	.0000000	.0061924	.0000000
-.13703	.19084	.00000	.00000	-.08714	.24177	.0364216	.0000000	.0064230	.0000000	.0180360	.0000000	.0063283	.0000000
-.15662	.18723	.00000	.00000	-.07670	.25976	.0350558	.0000000	.0054952	.0000000	.0187363	.0000000	.0064450	.0000000
-.17622	.18410	.00000	.00000	-.06652	.27795	.0338920	.0000000	.0046487	.0000000	.0194118	.0000000	.0065444	.0000000
-.19581	.18142	.00000	.00000	-.05657	.29634	.0329138	.0000000	.0038696	.0000000	.0200653	.0000000	.0066279	.0000000
-.21541	.17919	.00000	.00000	-.04683	.31493	.0321075	.0000000	.0031457	.0000000	.0207033	.0000000	.0066966	.0000000
-.23500	.17738	.00000	.00000	-.03726	.33370	.0314620	.0000000	.0024659	.0000000	.0213261	.0000000	.0067516	.0000000
-.25460	.17598	.00000	.00000	-.02782	.35265	.0309687	.0000000	.0018205	.0000000	.0219378	.0000000	.0067936	.0000000
-.27419	.17499	.00000	.00000	-.01849	.37179	.0306209	.0000000	.0012000	.0000000	.0225412	.0000000	.0068232	.0000000
-.29379	.17440	.00000	.00000	-.00923	.39112	.0304140	.0000000	.0005960	.0000000	.0231392	.0000000	.0068408	.0000000
-.31338	.17420	.00000	.00000	.00000	.41063	.0303454	.0000000	.0000000	.0000000	.0237344	.0000000	.0068465	.0000000

OLUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

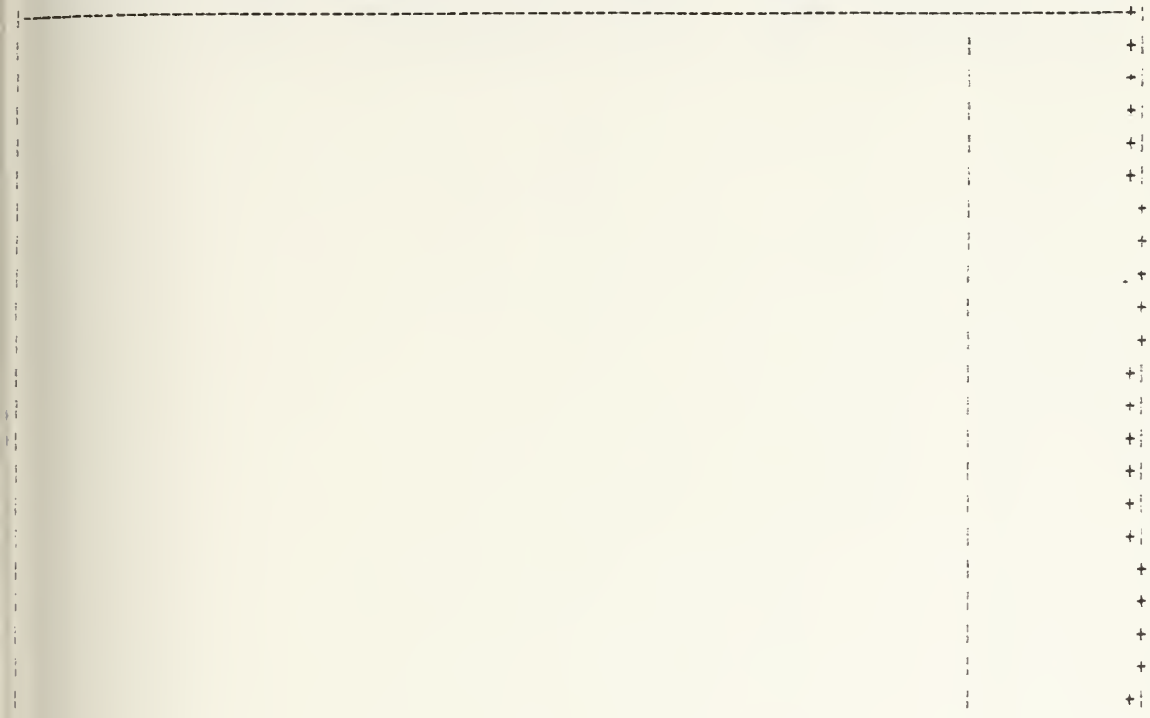
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.10013	.19177	.13809	.30365	-.02903	-.00452	.0367754	.3036525	.0152072	.1255653	.0000000	.0000000	.0000000	.0000000
.08290	.18747	.12798	.28331	-.03598	.01215	.0351451	.2833064	.0139275	.1122705	.0006196	.0050566	.0002510	.0020489
.06568	.18339	.11857	.26465	-.04117	.02871	.0336317	.2646539	.0127483	.1003188	.0012121	.0097772	.0004808	.0038804
.04845	.17952	.10978	.24757	-.04486	.04520	.0322289	.2475671	.0116613	.0895764	.0017795	.0141900	.0006911	.0055163
.03122	.17587	.10157	.23193	-.04731	.06163	.0309307	.2319281	.0106586	.0799217	.0023236	.0183208	.0008834	.0069765
.01399	.17243	.09387	.21763	-.04871	.07803	.0297313	.2176282	.0097330	.0712443	.0028462	.0221937	.0010590	.0082788
-.00324	.16919	.08664	.20457	-.04923	.09442	.0286251	.2045679	.0088777	.0634441	.0033489	.0258309	.0012194	.0094391
-.02047	.16615	.07984	.19266	-.04901	.11080	.0276068	.1926560	.0080862	.0564304	.0038334	.0292529	.0013655	.0104718
-.03770	.16331	.07342	.18181	-.04817	.12719	.0266716	.1818093	.0073528	.0501207	.0043010	.0324789	.0014985	.0113898
-.05493	.16067	.06735	.17195	-.04681	.14360	.0258149	.1719521	.0066718	.0444406	.0047531	.0355266	.0016193	.0122044
-.07216	.15822	.06159	.16302	-.04502	.16004	.0250323	.1630157	.0060382	.0393223	.0051912	.0384123	.0017288	.0129250
-.08939	.15595	.05612	.15494	-.04287	.17651	.0243200	.1549379	.0054474	.0347042	.0056163	.0411514	.0018278	.0135638
-.10662	.15386	.05091	.14766	-.04042	.19303	.0236743	.1476625	.0048949	.0305304	.0060298	.0437583	.0019169	.0141257
-.12385	.15196	.04592	.14114	-.03771	.20958	.0230919	.1411393	.0043766	.0267499	.0064327	.0462463	.0019968	.0146192
-.14108	.15023	.04114	.13532	-.03479	.22619	.0225697	.1353232	.0038887	.0233160	.0068261	.0486280	.0020680	.0150505
-.15831	.14868	.03654	.13017	-.03171	.24284	.0221052	.1301742	.0034278	.0201859	.0072109	.0509152	.0021310	.0154253
-.17554	.14730	.03210	.12566	-.02848	.25956	.0216958	.1256571	.0029905	.0173204	.0075883	.0531192	.0021863	.0157484
-.19277	.14608	.02780	.12174	-.02513	.27632	.0213395	.1217408	.0025737	.0146830	.0079590	.0552505	.0022342	.0160241
-.21000	.14503	.02361	.11840	-.02170	.29315	.0210344	.1183988	.0021745	.0122400	.0083241	.0573193	.0022751	.0162561
-.22723	.14415	.01953	.11561	-.01818	.31004	.0207789	.1156083	.0017901	.0099596	.0086843	.0593353	.0023093	.0164473
-.24446	.14343	.01552	.11335	-.01461	.32698	.0205716	.1133505	.0014178	.0078120	.0090405	.0613077	.0023369	.0166004
-.26169	.14287	.01159	.11161	-.01100	.34399	.0204115	.1116100	.0010551	.0057691	.0093936	.0632457	.0023582	.0167174
-.27892	.14247	.00770	.11038	-.00735	.36106	.0202978	.1103751	.0006995	.0038035	.0097443	.0651581	.0023733	.0167999
-.29615	.14223	.00384	.10964	-.00368	.37820	.0202298	.1096374	.0003486	.0018890	.0100934	.0670535	.0023824	.0168489
-.31338	.14215	.00000	.10939	.00000	.39540	.0202071	.1093921	.0000000	.0000000	.0104418	.0689404	.0023854	.0168652

LUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.02552	.05751	.10039	.19828	.11904	.00631	.0033073	.1982846	.0011208	.0671981	.0000000	.0000000	.0000000	.0000000
.01140	.05943	.09524	.19444	.10853	.02204	.0035315	.1944423	.0011469	.0631503	.0000483	.0027728	.0000160	.0009203
-.00273	.06117	.09021	.19065	.09889	.03762	.0037414	.1906467	.0011623	.0592255	.0000996	.0054917	.0000323	.0017843
-.01685	.06275	.08530	.18692	.09004	.05308	.0039371	.1869231	.0011675	.0554293	.0001538	.0081574	.0000488	.0025938
-.03097	.06418	.08051	.18329	.08191	.06841	.0041188	.1832929	.0011632	.0517646	.0002107	.0107713	.0000652	.0033507
-.04509	.06547	.07582	.17977	.07443	.08363	.0042868	.1797746	.0011501	.0482324	.0002701	.0133347	.0000816	.0040567
-.05921	.06665	.07123	.17638	.06756	.09876	.0044417	.1763834	.0011289	.0448319	.0003317	.0158493	.0000976	.0047137
-.07333	.06770	.06674	.17313	.06122	.11379	.0045838	.1731324	.0011004	.0415608	.0003954	.0183170	.0001134	.0053237
-.08745	.06866	.06235	.17003	.05539	.12873	.0047139	.1700325	.0010650	.0384157	.0004611	.0207399	.0001287	.0058884
-.10157	.06952	.05804	.16709	.05000	.14359	.0048325	.1670328	.0010236	.0353921	.0005285	.0231201	.0001434	.0064095
-.11569	.07029	.05381	.16432	.04502	.15838	.0049401	.1643208	.0009766	.0324846	.0005975	.0254600	.0001575	.0068887
-.12981	.07098	.04965	.16172	.04041	.17311	.0050375	.1617227	.0009247	.0296874	.0006679	.0277620	.0001710	.0073277
-.14393	.07159	.04557	.15930	.03613	.18777	.0051252	.1593037	.0008685	.0269938	.0007397	.0300286	.0001836	.0077279
-.15805	.07214	.04155	.15707	.03214	.20237	.0052036	.1570680	.0008083	.0243971	.0008126	.0322623	.0001955	.0080907
-.17217	.07262	.03758	.15502	.02843	.21692	.0052735	.1550189	.0007447	.0218898	.0008866	.0344657	.0002064	.0084175
-.18630	.07304	.03367	.15316	.02495	.23142	.0053352	.1531591	.0006780	.0194645	.0009615	.0366415	.0002165	.0087095
-.20042	.07341	.02981	.15149	.02167	.24587	.0053891	.1514909	.0006088	.0171133	.0010372	.0387925	.0002256	.0089677
-.21454	.07373	.02599	.15002	.01858	.26027	.0054358	.1500158	.0005373	.0148283	.0011136	.0409212	.0002336	.0091932
-.22866	.07400	.02221	.14874	.01565	.27463	.0054755	.1487354	.0004639	.0126015	.0011906	.0430305	.0002407	.0093859
-.24278	.07422	.01846	.14765	.01294	.28896	.0055085	.1476505	.0003889	.0104247	.0012682	.0451231	.0002467	.0095495
-.25690	.07440	.01474	.14676	.01015	.30324	.0055352	.1467619	.0003126	.0082895	.0013462	.0472018	.0002517	.0096816
-.27102	.07454	.01104	.14607	.00753	.31748	.0055557	.1460703	.0002354	.0061879	.0014245	.0492693	.0002556	.0097838
-.28514	.07463	.00735	.14558	.00499	.33169	.0055703	.1455760	.0001573	.0041113	.0015030	.0513284	.0002583	.0098565
-.29926	.07469	.00367	.14528	.00248	.34587	.0055790	.1452794	.0000788	.0020515	.0015817	.0533820	.0002600	.0099001
-.31338	.07471	.00000	.14518	.00000	.36000	.0055819	.1451805	.0000000	.0000000	.0016605	.0554327	.0002605	.0099145

WATER SURFACE ELEVATION

H/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



ELEV.VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.02610	4.96118	3.14159	180.00
-.02606	4.85782	3.07614	176.25
-.02597	4.75447	3.01069	172.50
-.02589	4.65111	2.94524	168.75
-.02590	4.54775	2.87979	165.00
-.02603	4.44439	2.81434	161.25
-.02625	4.34103	2.74889	157.50
-.02651	4.23768	2.68344	153.75
-.02665	4.13432	2.61799	150.00
-.02661	4.03096	2.55254	146.25
-.02633	3.92760	2.48709	142.50
-.02587	3.82424	2.42164	138.75
-.02537	3.72089	2.35619	135.00
-.02502	3.61753	2.29074	131.25
-.02497	3.51417	2.22529	127.50
-.02527	3.41081	2.15984	123.75
-.02587	3.30745	2.09440	120.00
-.02655	3.20410	2.02895	116.25
-.02705	3.10074	1.96350	112.50
-.02712	2.99738	1.89805	108.75
-.02664	2.89402	1.83260	105.00
-.02565	2.79066	1.76715	101.25
-.02438	2.68731	1.70170	97.50
-.02317	2.58395	1.63625	93.75
-.02238	2.48059	1.57080	90.00
-.02221	2.37723	1.50535	86.25
-.02264	2.27387	1.43990	82.50
-.02340	2.17052	1.37445	78.75
-.02399	2.06716	1.30900	75.00
-.02385	1.96380	1.24355	71.25
-.02254	1.86044	1.17810	67.50
-.01988	1.75708	1.11265	63.75
-.01601	1.65373	1.04720	60.00
-.01139	1.55037	.98175	56.25
-.00660	1.44701	.91630	52.50
-.00217	1.34365	.85085	48.75
.00176	1.24030	.78540	45.00
.00550	1.13694	.71995	41.25
.00990	1.03358	.65450	37.50
.01616	.93022	.58905	33.75
.02552	.82686	.52360	30.00
.03888	.72351	.45815	26.25
.05644	.62015	.39270	22.50
.07744	.51679	.32725	18.75
.10013	.41343	.26180	15.00
.12205	.31007	.19635	11.25
.14039	.20672	.13090	7.50
.15260	.10336	.06545	3.75
.15889	.00000	.00000	.00

.15889 -.02712

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

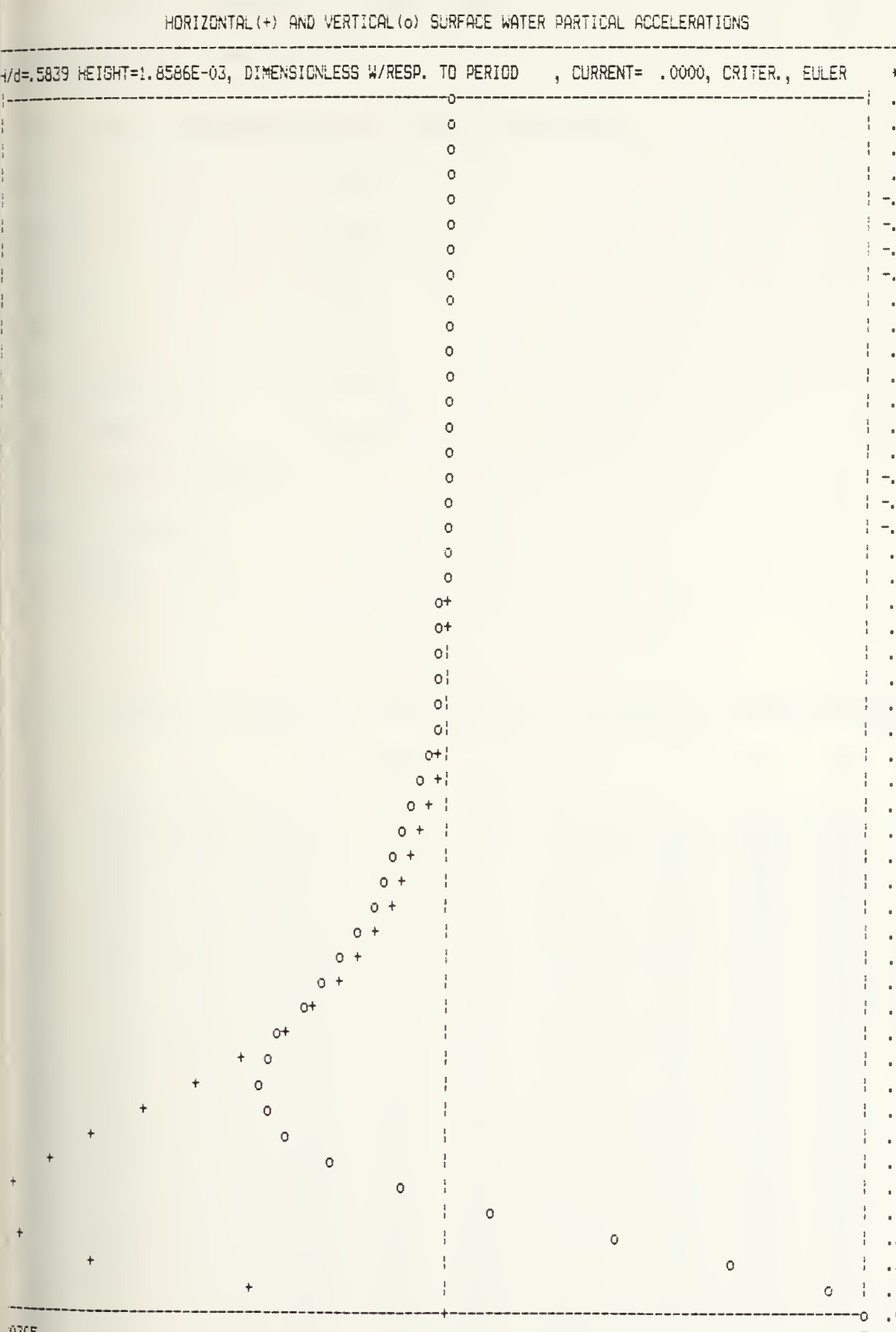
H/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

U	V	DIST.	ANGLE
*SQRT(X/G)		*K	DEGREES
-.04307	.00000	3.14159	180.00
-.04306	.00002	3.07914	176.25
-.04305	.00002	3.01669	172.50
-.04303	.00001	2.94424	168.75
-.04303	-.00001	2.87979	165.00
-.04306	-.00003	2.81434	161.25
-.04310	-.00002	2.74889	157.50
-.04314	.00002	2.68344	153.75
-.04315	.00010	2.61799	150.00
-.04313	.00020	2.55254	146.25
-.04305	.00029	2.48709	142.50
-.04294	.00035	2.42164	138.75
-.04281	.00036	2.35619	135.00
-.04272	.00033	2.29074	131.25
-.04267	.00029	2.22529	127.50
-.04268	.00029	2.15984	123.75
-.04273	.00037	2.09440	120.00
-.04277	.00055	2.02895	116.25
-.04275	.00086	1.96350	112.50
-.04262	.00127	1.89805	108.75
-.04235	.00174	1.83260	105.00
-.04195	.00223	1.76715	101.25
-.04146	.00273	1.70170	97.50
-.04091	.00323	1.63625	93.75
-.04035	.00384	1.57080	90.00
-.03978	.00462	1.50535	86.25
-.03915	.00570	1.43990	82.50
-.03835	.00720	1.37445	78.75
-.03726	.00921	1.30900	75.00
-.03572	.01179	1.24355	71.25
-.03365	.01500	1.17810	67.50
-.03095	.01890	1.11265	63.75
-.02756	.02358	1.04720	60.00
-.02337	.02916	.98175	56.25
-.01819	.03578	.91630	52.50
-.01172	.04357	.85085	48.75
-.00351	.05266	.78540	45.00
.00699	.06303	.71995	41.25
.02034	.07459	.65450	37.50
.03703	.08713	.58905	33.75
.05751	.10039	.52360	30.00
.08240	.11335	.45815	26.25
.11256	.12640	.39270	22.50
.14896	.13578	.32725	18.75
.19177	.13809	.26180	15.00
.23888	.12811	.19635	11.25
.28426	.10114	.13090	7.50
.31818	.05642	.06545	3.75
.33088	.00000	.00000	.00

33088 -.04315

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

H/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax *1/G	Ay *1/G	DIST. *K	ANGLE DEGREES
.00000	.00019	3.14159	180.00
.00014	.00012	3.07614	176.25
.00019	-.00004	3.01069	172.50
.00009	-.00019	2.94524	168.75
-.00013	-.00023	2.87979	165.00
-.00036	-.00008	2.81434	161.25
-.00046	.00025	2.74889	157.50
-.00033	.00064	2.68344	153.75
.00003	.00094	2.61799	150.00
.00053	.00102	2.55254	146.25
.00101	.00082	2.48709	142.50
.00128	.00038	2.42164	138.75
.00121	-.00011	2.35619	135.00
.00079	-.00041	2.29074	131.25
.00017	-.00032	2.22529	127.50
-.00038	.00029	2.15984	123.75
-.00058	.00133	2.09440	120.00
-.00022	.00258	2.02895	116.25
.00070	.00375	1.96350	112.50
.00205	.00460	1.89805	108.75
.00351	.00500	1.83260	105.00
.00476	.00507	1.76715	101.25
.00555	.00509	1.70170	97.50
.00581	.00551	1.63625	93.75
.00578	.00683	1.57080	90.00
.00593	.00937	1.50535	86.25
.00686	.01320	1.43990	82.50
.00909	.01808	1.37445	78.75
.01284	.02366	1.30900	75.00
.01805	.02963	1.24355	71.25
.02444	.03591	1.17810	67.50
.03168	.04267	1.11265	63.75
.03958	.05033	1.04720	60.00
.04828	.05945	.98175	56.25
.05842	.07047	.91630	52.50
.07116	.08334	.85085	48.75
.08780	.09716	.78540	45.00
.10925	.11009	.71995	41.25
.13550	.11966	.65450	37.50
.16564	.12339	.58905	33.75
.19828	.11904	.52360	30.00
.23190	.10433	.45815	26.25
.26431	.07654	.39270	22.50
.29109	.03265	.32725	18.75
.30365	-.02903	.26180	15.00
.28876	-.10544	.19635	11.25
.23281	-.18486	.13090	7.50
.13172	-.24695	.06545	3.75
.00000	-.27069	.00000	.00

0365 -.27069

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

DEPTH: FINITE, HEIGHT/DEPTH= .5839

AVE HEIGHT 1.858611E-03,DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .00

SOLUTION OF ORDER 10 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

WATER DEPTH	.31344
WAVE HEIGHT	.18302
WAVE PERIOD	9.9233
WAVE SPEED	.63317
MEAN EULERIAN FLUID SPEED	7.28110E-22
MEAN MASS TRANSPORT SPEED	1.31434E-02
MEAN FLUID SPEED RELATIVE TO WAVE	.63317
VOLUME FLUX DUE TO WAVES	4.11967E-03
BERNOULLI CONSTANT	.20262

OLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.15694	.33093	.00000	.00000	-.27171	.00000	.1095146	.0000000	.0515139	.0000000	.0000000	.0000000	.0000000	.0000000
.13734	.31412	.00000	.00000	-.26089	.01438	.0986717	.0000000	.0444797	.0000000	.0020402	.0000000	.0009407	.0000000
.11774	.29883	.00000	.00000	-.24881	.02898	.0892972	.0000000	.0385036	.0000000	.0038822	.0000000	.0017539	.0000000
.09814	.28491	.00000	.00000	-.23594	.04383	.0811711	.0000000	.0334089	.0000000	.0055527	.0000000	.0024586	.0000000
.07855	.27223	.00000	.00000	-.22262	.05893	.0741101	.0000000	.0290502	.0000000	.0070744	.0000000	.0030707	.0000000
.05895	.26069	.00000	.00000	-.20912	.07430	.0679614	.0000000	.0253080	.0000000	.0084667	.0000000	.0036034	.0000000
.03935	.25019	.00000	.00000	-.19563	.08993	.0625969	.0000000	.0220834	.0000000	.0097461	.0000000	.0040678	.0000000
.01975	.24064	.00000	.00000	-.18230	.10583	.0579091	.0000000	.0192947	.0000000	.0109270	.0000000	.0044733	.0000000
.00015	.23197	.00000	.00000	-.16920	.12199	.0538078	.0000000	.0168736	.0000000	.0120218	.0000000	.0048277	.0000000
-.01945	.22409	.00000	.00000	-.15640	.13840	.0502167	.0000000	.0147632	.0000000	.0130412	.0000000	.0051378	.0000000
-.03905	.21696	.00000	.00000	-.14394	.15505	.0470715	.0000000	.0129160	.0000000	.0139946	.0000000	.0054090	.0000000
-.05865	.21052	.00000	.00000	-.13184	.17195	.0443176	.0000000	.0112918	.0000000	.0148902	.0000000	.0056463	.0000000
-.07825	.20472	.00000	.00000	-.12011	.18908	.0419091	.0000000	.0098567	.0000000	.0157352	.0000000	.0058535	.0000000
-.09785	.19952	.00000	.00000	-.10872	.20644	.0398067	.0000000	.0085820	.0000000	.0165360	.0000000	.0060342	.0000000
-.11745	.19488	.00000	.00000	-.09768	.22401	.0379775	.0000000	.0074433	.0000000	.0172982	.0000000	.0061912	.0000000
-.13705	.19077	.00000	.00000	-.08696	.24181	.0363933	.0000000	.0064196	.0000000	.0180270	.0000000	.0063271	.0000000
-.15665	.18716	.00000	.00000	-.07653	.25980	.0350306	.0000000	.0054926	.0000000	.0187270	.0000000	.0064438	.0000000
-.17625	.18404	.00000	.00000	-.06636	.27800	.0338696	.0000000	.0046468	.0000000	.0194022	.0000000	.0065432	.0000000
-.19585	.18137	.00000	.00000	-.05644	.29640	.0328938	.0000000	.0038682	.0000000	.0200564	.0000000	.0066266	.0000000
-.21544	.17914	.00000	.00000	-.04672	.31499	.0320894	.0000000	.0031447	.0000000	.0206932	.0000000	.0066954	.0000000
-.23504	.17733	.00000	.00000	-.03717	.33376	.0314456	.0000000	.0024652	.0000000	.0213159	.0000000	.0067503	.0000000
-.25464	.17594	.00000	.00000	-.02775	.35273	.0309534	.0000000	.0018200	.0000000	.0219274	.0000000	.0067923	.0000000
-.27424	.17495	.00000	.00000	-.01844	.37187	.0306065	.0000000	.0011997	.0000000	.0225306	.0000000	.0068219	.0000000
-.29384	.17436	.00000	.00000	-.00920	.39120	.0304002	.0000000	.0005958	.0000000	.0231285	.0000000	.0068395	.0000000
-.31344	.17416	.00000	.00000	.00000	.41071	.0303317	.0000000	.0000000	.0000000	.0237236	.0000000	.0068453	.0000000

UTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.09796	.19087	.13630	.29945	-.02869	-.00244	.0364301	.2994505	.0149872	.1231931	.0000000	.0000000	.0000000	.0000000
.08081	.18669	.12637	.27956	-.03560	.01414	.0348521	.2795558	.0137406	.1102165	.0006109	.0049625	.0002462	.0020005
.06367	.18271	.11712	.26131	-.04075	.03063	.0333834	.2613083	.0125894	.0985431	.0011958	.0095982	.0004719	.0037897
.04653	.17894	.10848	.24459	-.04443	.04704	.0320190	.2445851	.0115260	.0880439	.0017563	.0139341	.0006786	.0053889
.02939	.17537	.10039	.22927	-.04687	.06340	.0307538	.2292726	.0105434	.0786018	.0022943	.0179954	.0008677	.0068172
.01225	.17200	.09281	.21527	-.04828	.07972	.0295828	.2152659	.0096348	.0701098	.0028115	.0218054	.0010407	.0080918
-.00489	.16882	.08569	.20247	-.04880	.09603	.0285011	.2024687	.0087939	.0624713	.0033093	.0253857	.0011986	.0092281
-.02203	.16584	.07899	.19079	-.04860	.11233	.0275040	.1907929	.0080148	.0555983	.0037893	.0287563	.0013427	.0102401
-.03918	.16306	.07266	.18016	-.04778	.12865	.0265871	.1801577	.0072919	.0494109	.0042529	.0319356	.0014739	.0111401
-.05632	.16046	.06667	.17049	-.04644	.14498	.0257462	.1704897	.0066199	.0438369	.0047014	.0349410	.0015931	.0119393
-.07346	.15804	.06099	.16172	-.04467	.16134	.0249773	.1617223	.0059941	.0388104	.0051362	.0377883	.0017012	.0126476
-.09060	.15581	.05559	.15380	-.04254	.17774	.0242769	.1537951	.0054099	.0342717	.0055583	.0404925	.0017990	.0132740
-.10774	.15376	.05044	.14665	-.04011	.19417	.0236415	.1466535	.0048630	.0301664	.0059690	.0430676	.0018870	.0138263
-.12488	.15188	.04551	.14025	-.03743	.21065	.0230679	.1402486	.0043496	.0264449	.0063694	.0455265	.0019660	.0143115
-.14203	.15018	.04078	.13454	-.03454	.22717	.0225535	.1345368	.0038660	.0230617	.0067604	.0478817	.0020364	.0147358
-.15917	.14865	.03622	.12948	-.03148	.24375	.0220955	.1294790	.0034088	.0199752	.0071430	.0501445	.0020987	.0151047
-.17631	.14728	.03182	.12504	-.02828	.26037	.0216918	.1250409	.0029746	.0171472	.0075183	.0523259	.0021534	.0154228
-.19345	.14608	.02756	.12119	-.02496	.27706	.0213402	.1211926	.0025606	.0145420	.0078872	.0544363	.0022009	.0156944
-.21059	.14505	.02341	.11791	-.02155	.29380	.0210390	.1179081	.0021639	.0121268	.0082504	.0564856	.0022414	.0159230
-.22773	.14418	.01937	.11517	-.01806	.31060	.0207868	.1151652	.0017816	.0098705	.0086089	.0584832	.0022752	.0161115
-.24487	.14346	.01540	.11295	-.01451	.32747	.0205821	.1129456	.0014112	.0077443	.0089634	.0604383	.0023026	.0162625
-.26202	.14291	.01149	.11123	-.01092	.34439	.0204240	.1112344	.0010503	.0057202	.0093149	.0623597	.0023237	.0163779
-.27916	.14252	.00764	.11002	-.00730	.36138	.0203116	.1100202	.0006963	.0037718	.0096640	.0642560	.0023386	.0164593
-.29630	.14228	.00381	.10929	-.00365	.37842	.0202444	.1092949	.0003470	.0018735	.0100116	.0661357	.0023476	.0165076
-.31344	.14220	.00000	.10905	.00000	.39553	.0202220	.1090537	.0000000	.0000000	.0103584	.0680072	.0023505	.0165237

UTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.02789	.05785	.10116	.19830	.11802	.00411	.0033462	.1983021	.0011422	.0676867	.0000000	.0000000	.0000000	.0000000
.01367	.05975	.09597	.19451	.10763	.01994	.0035698	.1945132	.0011677	.0636271	.0000492	.0027933	.0000164	.0009338
-.00055	.06147	.09091	.19075	.09809	.03562	.0037791	.1907541	.0011824	.0596845	.0001014	.0055330	.0000331	.0018107
-.01478	.06304	.08596	.18705	.08932	.05117	.0039741	.1870532	.0011869	.0558662	.0001566	.0082196	.0000500	.0026323
-.02900	.06446	.08112	.18343	.08126	.06661	.0041551	.1834348	.0011819	.0521767	.0002144	.0108542	.0000668	.0034006
-.04322	.06575	.07640	.17992	.07385	.08193	.0043224	.1799193	.0011680	.0486179	.0002747	.0134380	.0000835	.0041174
-.05744	.06691	.07177	.17652	.06703	.09716	.0044766	.1765240	.0011460	.0451899	.0003372	.0159727	.0001000	.0047845
-.07166	.06796	.06725	.17326	.06075	.11229	.0046181	.1732635	.0011165	.0418910	.0004019	.0184601	.0001161	.0054037
-.08589	.06890	.06281	.17015	.05495	.12733	.0047474	.1701501	.0010803	.0387184	.0004685	.0209021	.0001317	.0059769
-.10011	.06975	.05847	.16719	.04960	.14230	.0048653	.1671940	.0010379	.0356679	.0005369	.0233010	.0001468	.0065059
-.11433	.07052	.05420	.16440	.04466	.15719	.0049724	.1644037	.0009901	.0327344	.0006068	.0256590	.0001612	.0069923
-.12855	.07120	.05002	.16179	.04008	.17201	.0050691	.1617861	.0009372	.0299123	.0006782	.0279786	.0001749	.0074378
-.14278	.07181	.04590	.15935	.03583	.18677	.0051562	.1593472	.0008800	.0271951	.0007509	.0302622	.0001878	.0078439
-.15700	.07235	.04185	.15709	.03188	.20148	.0052341	.1570917	.0008188	.0245760	.0008248	.0325124	.0001999	.0082120
-.17122	.07282	.03785	.15502	.02819	.21613	.0053035	.1550233	.0007543	.0220476	.0008998	.0347319	.0002111	.0085436
-.18544	.07324	.03391	.15315	.02473	.23072	.0053647	.1531452	.0006867	.0196025	.0009756	.0369233	.0002213	.0088398
-.19966	.07361	.03002	.15146	.02148	.24527	.0054182	.1514599	.0006165	.0172327	.0010523	.0390893	.0002306	.0091017
-.21389	.07392	.02618	.14997	.01842	.25978	.0054645	.1499693	.0005440	.0149302	.0011297	.0412328	.0002389	.0093304
-.22811	.07419	.02237	.14867	.01551	.27424	.0055038	.1486750	.0004697	.0126869	.0012077	.0433565	.0002461	.0095268
-.24233	.07441	.01859	.14758	.01273	.28867	.0055366	.1475781	.0003937	.0104944	.0012862	.0454632	.0002522	.0096916
-.25655	.07459	.01484	.14668	.01005	.30305	.0055630	.1466796	.0003165	.0083444	.0013651	.0475557	.0002572	.0098256
-.27077	.07472	.01111	.14598	.00747	.31740	.0055834	.1459802	.0002382	.0062285	.0014444	.0496368	.0002612	.0099292
-.28500	.07482	.00740	.14548	.00494	.33171	.0055978	.1454802	.0001592	.0041381	.0015239	.0517094	.0002640	.0100030
-.29922	.07488	.00370	.14518	.00246	.34598	.0056064	.1451802	.0000797	.0020648	.0016036	.0537763	.0002657	.0100471
-.31344	.07489	.00000	.14508	.00000	.36022	.0056092	.1450801	.0000000	.0000000	.0016833	.0558404	.0002663	.0100617

WATER SURFACE ELEVATION

=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

ELEV.VS.	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.02608	4.96165	3.14159	180.00
-.02611	4.85828	3.07614	176.25
-.02617	4.75492	3.01069	172.50
-.02622	4.65155	2.94524	168.75
-.02617	4.54818	2.87979	165.00
-.02603	4.44481	2.81434	161.25
-.02584	4.34145	2.74889	157.50
-.02570	4.23808	2.68344	153.75
-.02569	4.13471	2.61799	150.00
-.02586	4.03134	2.55254	146.25
-.02616	3.92797	2.48709	142.50
-.02647	3.82461	2.42164	138.75
-.02663	3.72124	2.35619	135.00
-.02652	3.61787	2.29074	131.25
-.02613	3.51450	2.22529	127.50
-.02557	3.41114	2.15984	123.75
-.02506	3.30777	2.09440	120.00
-.02482	3.20440	2.02895	116.25
-.02496	3.10103	1.96350	112.50
-.02544	2.99766	1.89805	108.75
-.02604	2.89430	1.83260	105.00
-.02644	2.79093	1.76715	101.25
-.02636	2.68756	1.70170	97.50
-.02567	2.58419	1.63625	93.75
-.02447	2.48083	1.57080	90.00
-.02307	2.37746	1.50535	86.25
-.02186	2.27409	1.43990	82.50
-.02117	2.17072	1.37445	78.75
-.02105	2.06736	1.30900	75.00
-.02124	1.96399	1.24355	71.25
-.02121	1.86062	1.17810	67.50
-.02032	1.75725	1.11265	63.75
-.01810	1.65388	1.04720	60.00
-.01439	1.55052	.98175	56.25
-.00944	1.44715	.91630	52.50
-.00380	1.34378	.85085	48.75
.00193	1.24041	.78540	45.00
.00746	1.13705	.71995	41.25
.01300	1.03368	.65450	37.50
.01939	.93031	.58905	33.75
.02789	.82694	.52360	30.00
.03976	.72357	.45815	26.25
.05574	.62021	.39270	22.50
.07562	.51684	.32725	18.75
.09796	.41347	.26180	15.00
.12026	.31010	.19635	11.25
.13940	.20674	.13090	7.50
.15236	.10337	.06545	3.75
.15694	.00000	.00000	.00

-.02663

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

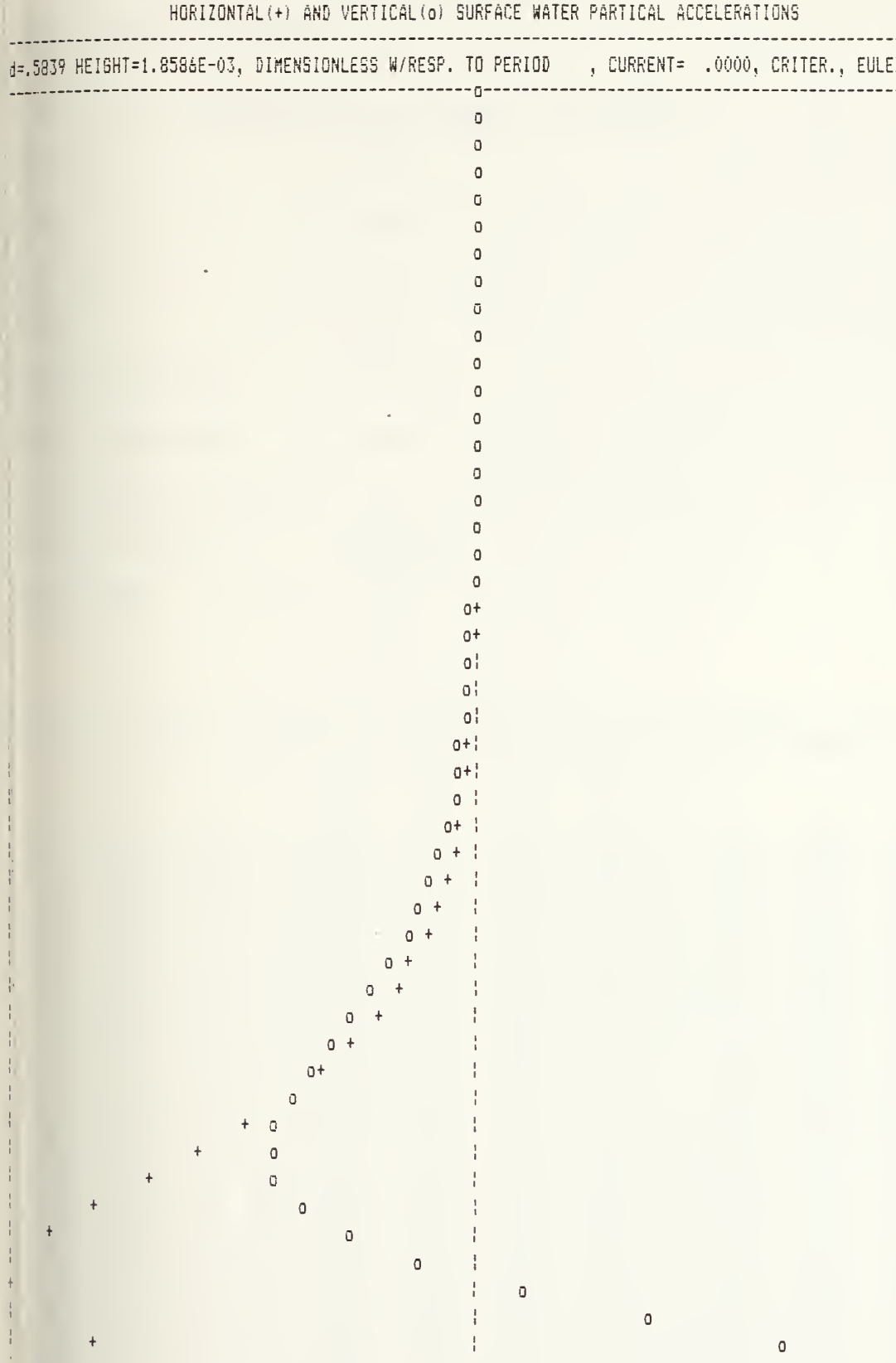
d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.04313	.00000	3.14159	180.00
-.04314	.00000	3.07614	176.25
-.04314	.00001	3.01069	172.50
-.04314	.00003	2.94524	168.75
-.04313	.00005	2.87979	165.00
-.04311	.00007	2.81434	161.25
-.04309	.00008	2.74889	157.50
-.04307	.00008	2.68344	153.75
-.04306	.00007	2.61799	150.00
-.04306	.00008	2.55254	146.25
-.04307	.00010	2.48709	142.50
-.04307	.00016	2.42164	138.75
-.04306	.00024	2.35619	135.00
-.04301	.00034	2.29074	131.25
-.04293	.00045	2.22529	127.50
-.04282	.00055	2.15984	123.75
-.04271	.00065	2.09440	120.00
-.04260	.00076	2.02895	116.25
-.04249	.00091	1.96350	112.50
-.04239	.00113	1.89805	108.75
-.04224	.00145	1.83260	105.00
-.04203	.00189	1.76715	101.25
-.04172	.00245	1.70170	97.50
-.04129	.00314	1.63625	93.75
-.04074	.00396	1.57080	90.00
-.04005	.00494	1.50535	86.25
-.03923	.00614	1.43990	82.50
-.03824	.00762	1.37445	78.75
-.03701	.00949	1.30900	75.00
-.03544	.01185	1.24355	71.25
-.03341	.01483	1.17810	67.50
-.03081	.01854	1.11265	63.75
-.02752	.02313	1.04720	60.00
-.02341	.02875	.98175	56.25
-.01828	.03556	.91630	52.50
-.01184	.04370	.85085	48.75
-.00364	.05319	.78540	45.00
.00687	.06396	.71995	41.25
.02029	.07578	.65450	37.50
.03714	.08831	.58905	33.75
.05785	.10116	.52360	30.00
.08286	.11384	.45815	26.25
.11287	.12546	.39270	22.50
.14874	.13411	.32725	18.75
.19087	.13630	.26180	15.00
.23758	.12689	.19635	11.25
.28322	.10078	.13090	7.50
.31784	.05652	.06545	3.75
.33093	.00000	.00000	.00

-.04314

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax *1/G	Ay *1/G	DIST. *K	ANGLE DEGREES
.00000	.00003	3.14159	180.00
-.00004	.00006	3.07614	176.25
-.00003	.00013	3.01069	172.50
.00004	.00019	2.94524	168.75
.00014	.00020	2.87979	165.00
.00023	.00014	2.81434	161.25
.00025	.00004	2.74889	157.50
.00017	-.00003	2.68344	153.75
.00004	-.00001	2.61799	150.00
-.00008	.00015	2.55254	146.25
-.00010	.00041	2.48709	142.50
.00004	.00072	2.42164	138.75
.00032	.00096	2.35619	135.00
.00068	.00108	2.29074	131.25
.00099	.00107	2.22529	127.50
.00118	.00101	2.15984	123.75
.00119	.00103	2.09440	120.00
.00109	.00129	2.02895	116.25
.00104	.00188	1.96350	112.50
.00121	.00279	1.89805	108.75
.00172	.00394	1.83260	105.00
.00261	.00518	1.76715	101.25
.00380	.00643	1.70170	97.50
.00515	.00769	1.63625	93.75
.00652	.00912	1.57080	90.00
.00787	.01096	1.50535	86.25
.00932	.01352	1.43990	82.50
.01117	.01706	1.37445	78.75
.01381	.02172	1.30900	75.00
.01761	.02747	1.24355	71.25
.02280	.03423	1.17810	67.50
.02947	.04199	1.11265	63.75
.03762	.05083	1.04720	60.00
.04733	.06096	.98175	56.25
.05889	.07248	.91630	52.50
.07293	.08526	.85085	48.75
.09029	.09857	.78540	45.00
.11172	.11087	.71995	41.25
.13744	.11988	.65450	37.50
.16676	.12305	.58905	33.75
.19830	.11802	.52360	30.00
.23043	.10269	.45815	26.25
.26113	.07478	.39270	22.50
.28668	.03163	.32725	18.75
.29945	-.02869	.26180	15.00
.28651	-.10406	.19635	11.25
.23305	-.18377	.13090	7.50
.13288	-.24719	.06545	3.75
.00000	-.27171	.00000	.00

.45 -.27171

DEPTH: FINITE, HEIGHT/DEPTH= .5839

WAVE HEIGHT 1.858611E-03,DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .00

SOLUTION OF ORDER 12 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

WATER DEPTH	.31347
WAVE HEIGHT	.18304
WAVE PERIOD	9.9237
WAVE SPEED	.63315
MEAN EULERIAN FLUID SPEED	6.80526E-24
MEAN MASS TRANSPORT SPEED	1.30239E-02
MEAN FLUID SPEED RELATIVE TO WAVE	.63315
VOLUME FLUX DUE TO WAVES	4.08259E-03
BERNOULLI CONSTANT	.20266

SOLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.15700	.33097	.00000	.00000	-.27229	.00000	.1095422	.0000000	.0515365	.0000000	.0000000	.0000000	.0000000	.0000000
.13740	.31412	.00000	.00000	-.26135	.01437	.0986736	.0000000	.0444888	.0000000	.0020408	.0000000	.0009412	.0000000
.11780	.29880	.00000	.00000	-.24915	.02897	.0892826	.0000000	.0385045	.0000000	.0038831	.0000000	.0017546	.0000000
.09819	.28486	.00000	.00000	-.23618	.04381	.0811463	.0000000	.0334049	.0000000	.0055535	.0000000	.0024595	.0000000
.07859	.27218	.00000	.00000	-.22278	.05892	.0740795	.0000000	.0290436	.0000000	.0070750	.0000000	.0030716	.0000000
.05899	.26063	.00000	.00000	-.20921	.07429	.0679280	.0000000	.0253002	.0000000	.0084669	.0000000	.0036042	.0000000
.03938	.25013	.00000	.00000	-.19568	.08992	.0625627	.0000000	.0220755	.0000000	.0097459	.0000000	.0040686	.0000000
.01978	.24057	.00000	.00000	-.18230	.10582	.0578754	.0000000	.0192870	.0000000	.0109263	.0000000	.0044740	.0000000
.00018	.23190	.00000	.00000	-.16917	.12198	.0537753	.0000000	.0168665	.0000000	.0120207	.0000000	.0048283	.0000000
-.01942	.22402	.00000	.00000	-.15635	.13839	.0501860	.0000000	.0147569	.0000000	.0130396	.0000000	.0051383	.0000000
-.03903	.21689	.00000	.00000	-.14388	.15505	.0470427	.0000000	.0129105	.0000000	.0139926	.0000000	.0054095	.0000000
-.05863	.21045	.00000	.00000	-.13177	.17195	.0442908	.0000000	.0112870	.0000000	.0148878	.0000000	.0056466	.0000000
-.07823	.20466	.00000	.00000	-.12003	.18909	.0418842	.0000000	.0098527	.0000000	.0157325	.0000000	.0058538	.0000000
-.09784	.19946	.00000	.00000	-.10864	.20645	.0397837	.0000000	.0085787	.0000000	.0165329	.0000000	.0060345	.0000000
-.11744	.19482	.00000	.00000	-.09760	.22403	.0379562	.0000000	.0074405	.0000000	.0172949	.0000000	.0061915	.0000000
-.13704	.19072	.00000	.00000	-.08688	.24183	.0363736	.0000000	.0064173	.0000000	.0180235	.0000000	.0063273	.0000000
-.15664	.18712	.00000	.00000	-.07646	.25983	.0350123	.0000000	.0054908	.0000000	.0187231	.0000000	.0064440	.0000000
-.17625	.18399	.00000	.00000	-.06630	.27803	.0338525	.0000000	.0046453	.0000000	.0193981	.0000000	.0065434	.0000000
-.19585	.18132	.00000	.00000	-.05638	.29644	.0328776	.0000000	.0038670	.0000000	.0200522	.0000000	.0066268	.0000000
-.21545	.17909	.00000	.00000	-.04667	.31503	.0320742	.0000000	.0031437	.0000000	.0206888	.0000000	.0066955	.0000000
-.23506	.17729	.00000	.00000	-.03713	.33381	.0314310	.0000000	.0024646	.0000000	.0213112	.0000000	.0067505	.0000000
-.25466	.17590	.00000	.00000	-.02772	.35278	.0309394	.0000000	.0018195	.0000000	.0219226	.0000000	.0067925	.0000000
-.27426	.17491	.00000	.00000	-.01843	.37193	.0305928	.0000000	.0011994	.0000000	.0225257	.0000000	.0068221	.0000000
-.29387	.17432	.00000	.00000	-.00920	.39126	.0303867	.0000000	.0005957	.0000000	.0231234	.0000000	.0068397	.0000000
-.31347	.17412	.00000	.00000	.00000	.41077	.0303183	.0000000	.0000000	.0000000	.0237184	.0000000	.0068455	.0000000

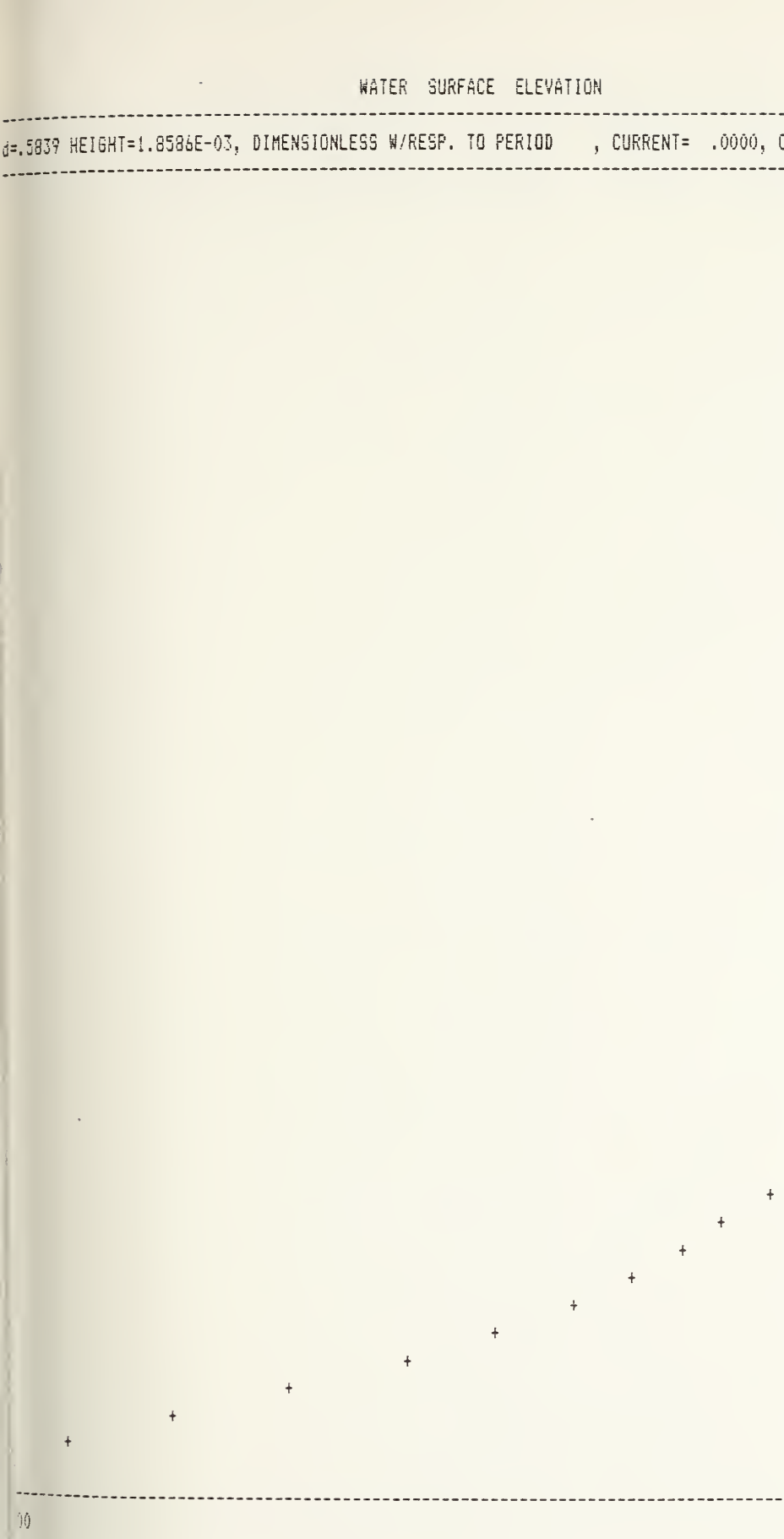
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.09546	.19009	.13456	.29554	-.02934	.00000	.0361352	.2955448	.0147766	.1208553	.0000000	.0000000	.0000000	.0000000
.07842	.18600	.12482	.27612	-.03603	.01648	.0345948	.2761184	.0135572	.1082068	.0006026	.0048701	.0002414	.0019514
.06138	.18210	.11573	.25829	-.04101	.03286	.0331591	.2582862	.0124296	.0968178	.0011798	.0094229	.0004628	.0036981
.04434	.17839	.10724	.24193	-.04455	.04917	.0318238	.2419317	.0113868	.0865652	.0017334	.0136843	.0006657	.0052604
.02730	.17488	.09929	.22695	-.04689	.06542	.0305842	.2269464	.0104222	.0773365	.0022651	.0176788	.0008515	.0066567
.01026	.17157	.09183	.21323	-.04821	.08165	.0294358	.2132303	.0095293	.0690294	.0027764	.0214288	.0010214	.0079036
-.00678	.16845	.08481	.20069	-.04868	.09786	.0283742	.2006911	.0087022	.0615505	.0032689	.0249551	.0011768	.0090161
-.02381	.16551	.07820	.18924	-.04843	.11407	.0273948	.1892441	.0079350	.0548154	.0037440	.0282771	.0013185	.0100074
-.04085	.16277	.07196	.17881	-.04758	.13029	.0264937	.1788119	.0072226	.0487470	.0042031	.0314126	.0014476	.0108897
-.05789	.16021	.06605	.16932	-.04623	.14653	.0256667	.1693237	.0065598	.0432753	.0046474	.0343785	.0015650	.0116736
-.07493	.15783	.06044	.16072	-.04445	.16280	.0249102	.1607153	.0059420	.0383369	.0050783	.0371902	.0016715	.0123689
-.09197	.15563	.05510	.15293	-.04231	.17910	.0242206	.1529284	.0053649	.0338737	.0054969	.0398622	.0017679	.0129841
-.10901	.15361	.05000	.14591	-.03989	.19543	.0235948	.1459104	.0048242	.0298331	.0059042	.0424081	.0018547	.0135268
-.12605	.15176	.04513	.13961	-.03721	.21182	.0230297	.1396141	.0043163	.0261669	.0063014	.0448405	.0019325	.0140039
-.14308	.15008	.04044	.13400	-.03434	.22824	.0225226	.1339970	.0038375	.0228311	.0066895	.0471715	.0020020	.0144213
-.16012	.14856	.03593	.12902	-.03129	.24472	.0220711	.1290216	.0033845	.0197850	.0070694	.0494122	.0020635	.0147844
-.17716	.14722	.03158	.12465	-.02810	.26126	.0216729	.1246546	.0029542	.0169914	.0074421	.0515733	.0021175	.0150977
-.19420	.14603	.02735	.12087	-.02480	.27784	.0213261	.1208669	.0025436	.0144157	.0078084	.0536650	.0021644	.0153653
-.21124	.14501	.02324	.11763	-.02141	.29449	.0210289	.1176334	.0021498	.0120258	.0081692	.0556968	.0022044	.0155905
-.22828	.14415	.01922	.11493	-.01794	.31119	.0207800	.1149326	.0017703	.0097914	.0085254	.0576781	.0022378	.0157764
-.24531	.14345	.01528	.11275	-.01442	.32795	.0205780	.1127467	.0014025	.0076841	.0088777	.0596178	.0022648	.0159253
-.26235	.14291	.01141	.11106	-.01085	.34478	.0204219	.1110613	.0010439	.0056770	.0092270	.0615244	.0022856	.0160391
-.27939	.14252	.00758	.10987	-.00725	.36166	.0203110	.1098653	.0006921	.0037439	.0095740	.0634066	.0023004	.0161194
-.29643	.14228	.00378	.10915	-.00363	.37861	.0202446	.1091508	.0003449	.0018598	.0099195	.0652724	.0023092	.0161671
-.31347	.14221	.00000	.10891	.00000	.39561	.0202225	.1089132	.0000000	.0000000	.0102643	.0671302	.0023122	.0161829

TION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.03173	.05754	.10260	.19951	.11989	.00000	.0033110	.1995081	.0011430	.0688707	.0000000	.0000000	.0000000	.0000000
.01735	.05949	.09731	.19564	.10929	.01603	.0035389	.1956408	.0011707	.0647217	.0000493	.0028418	.0000166	.0009608
.00297	.06126	.09215	.19180	.09956	.03191	.0037524	.1918000	.0011874	.0606924	.0001017	.0056282	.0000336	.0018627
-.01142	.06286	.08712	.18802	.09061	.04767	.0039513	.1880158	.0011935	.0567906	.0001571	.0083597	.0000507	.0027076
-.02580	.06431	.08220	.18431	.08240	.06329	.0041360	.1843138	.0011898	.0530213	.0002153	.0110374	.0000679	.0034973
-.04018	.06563	.07740	.18072	.07484	.07881	.0043067	.1807154	.0011770	.0493869	.0002760	.0136626	.0000849	.0042338
-.05457	.06681	.07270	.17724	.06789	.09421	.0044640	.1772389	.0011557	.0458875	.0003391	.0162369	.0001017	.0049190
-.06895	.06788	.06810	.17390	.06150	.10953	.0046084	.1738996	.0011268	.0425217	.0004043	.0187622	.0001181	.0055548
-.08333	.06885	.06360	.17071	.05560	.12475	.0047404	.1707104	.0010909	.0392864	.0004715	.0212405	.0001340	.0061432
-.09772	.06972	.05919	.16768	.05016	.13990	.0048606	.1676819	.0010487	.0361776	.0005406	.0236741	.0001494	.0066859
-.11210	.07050	.05487	.16482	.04514	.15496	.0049697	.1648230	.0010007	.0331901	.0006113	.0260654	.0001642	.0071848
-.12648	.07119	.05062	.16214	.04049	.16996	.0050683	.1621411	.0009477	.0303179	.0006835	.0284168	.0001782	.0076415
-.14087	.07181	.04645	.15964	.03617	.18490	.0051570	.1596421	.0008901	.0275544	.0007570	.0307310	.0001914	.0080577
-.15525	.07236	.04234	.15733	.03217	.19977	.0052364	.1573309	.0008285	.0248926	.0008318	.0330106	.0002037	.0084349
-.16963	.07285	.03830	.15521	.02843	.21459	.0053070	.1552116	.0007633	.0223248	.0009076	.0352583	.0002152	.0087745
-.18402	.07328	.03431	.15329	.02493	.22936	.0053693	.1532873	.0006951	.0198432	.0009844	.0374770	.0002257	.0090777
-.19840	.07365	.03037	.15156	.02165	.24408	.0054237	.1515606	.0006241	.0174397	.0010620	.0396693	.0002352	.0093458
-.21278	.07396	.02648	.15003	.01855	.25875	.0054708	.1500334	.0005508	.0151060	.0011403	.0418383	.0002436	.0095799
-.22717	.07423	.02262	.14871	.01562	.27338	.0055108	.1487074	.0004756	.0128335	.0012193	.0439868	.0002510	.0097808
-.24155	.07446	.01880	.14758	.01281	.28797	.0055441	.1475837	.0003987	.0106138	.0012988	.0461176	.0002573	.0099495
-.25593	.07464	.01501	.14666	.01012	.30251	.0055709	.1466633	.0003205	.0084381	.0013787	.0482338	.0002625	.0100865
-.27032	.07478	.01124	.14595	.00751	.31702	.0055916	.1459467	.0002413	.0062976	.0014590	.0503381	.0002665	.0101925
-.28470	.07487	.00748	.14543	.00497	.33150	.0056062	.1454346	.0001613	.0041837	.0015396	.0524337	.0002694	.0102678
-.29909	.07493	.00374	.14513	.00248	.34593	.0056150	.1451272	.0000808	.0020874	.0016203	.0545233	.0002711	.0103129
-.31347	.07495	.00000	.14502	.00000	.36034	.0056179	.1450247	.0000000	.0000000	.0017010	.0566100	.0002717	.0103279

WATER SURFACE ELEVATION

d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

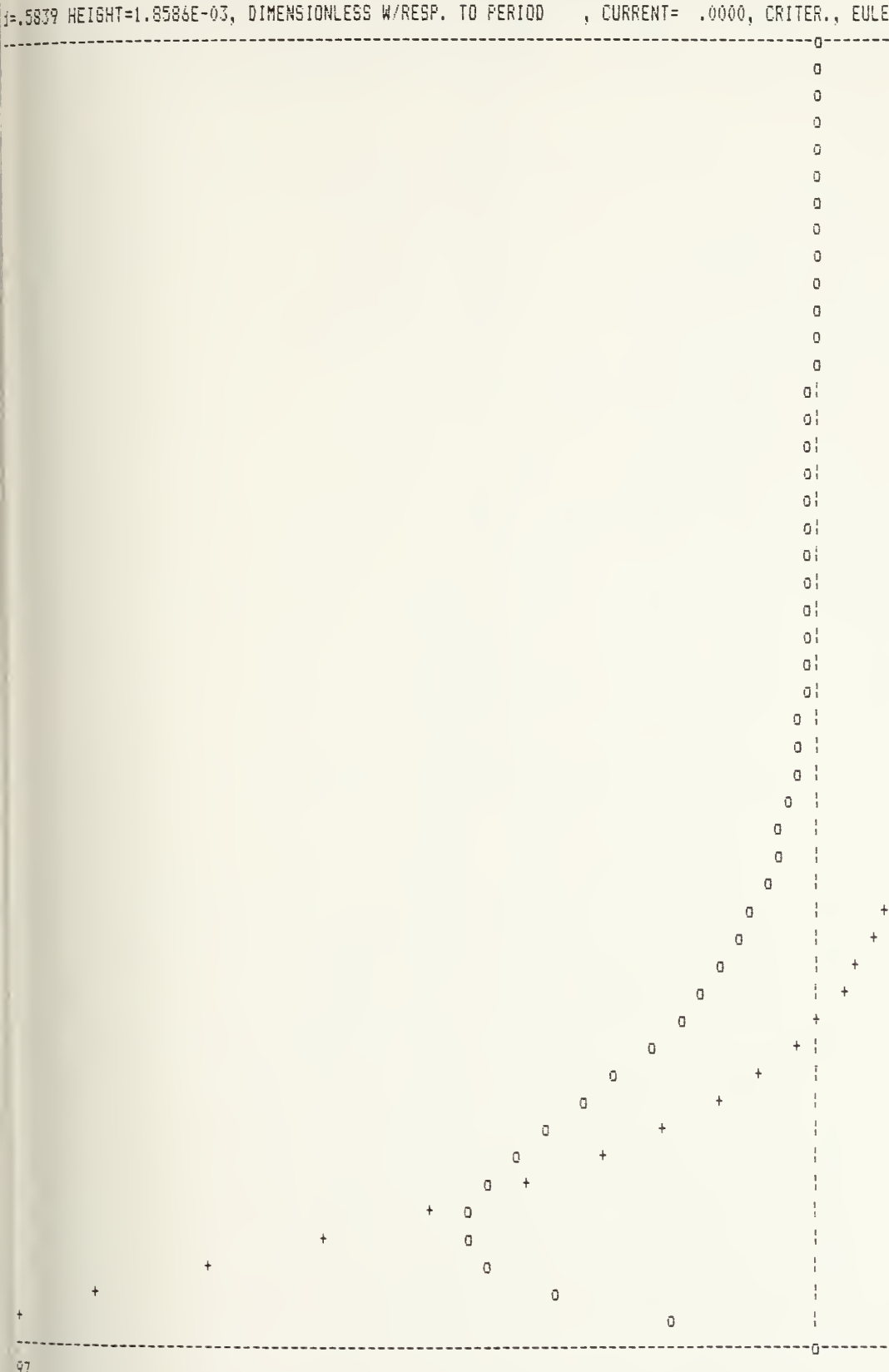


ELEV.VS.	TIME	DIST.	ANGLE
*K	(K*G)^.5	*K	DEGREES
-.02603	4.96187	3.14159	180.00
-.02605	4.85850	3.07614	176.25
-.02609	4.75513	3.01069	172.50
-.02609	4.65175	2.94524	168.75
-.02603	4.54838	2.87979	165.00
-.02593	4.44501	2.81434	161.25
-.02585	4.34164	2.74889	157.50
-.02588	4.23826	2.68344	153.75
-.02601	4.13489	2.61799	150.00
-.02617	4.03152	2.55254	146.25
-.02626	3.92815	2.48709	142.50
-.02619	3.82477	2.42164	138.75
-.02595	3.72140	2.35619	135.00
-.02565	3.61803	2.29074	131.25
-.02548	3.51466	2.22529	127.50
-.02553	3.41129	2.15984	123.75
-.02579	3.30791	2.09440	120.00
-.02609	3.20454	2.02895	116.25
-.02619	3.10117	1.96350	112.50
-.02595	2.99780	1.89805	108.75
-.02540	2.89442	1.83260	105.00
-.02476	2.79105	1.76715	101.25
-.02431	2.68768	1.70170	97.50
-.02422	2.58431	1.63625	93.75
-.02442	2.48093	1.57080	90.00
-.02461	2.37756	1.50535	86.25
-.02439	2.27419	1.43990	82.50
-.02349	2.17082	1.37445	78.75
-.02196	2.06745	1.30900	75.00
-.02013	1.96407	1.24355	71.25
-.01841	1.86070	1.17810	67.50
-.01705	1.75733	1.11265	63.75
-.01588	1.65396	1.04720	60.00
-.01432	1.55058	.98175	56.25
-.01164	1.44721	.91630	52.50
-.00730	1.34384	.85085	48.75
-.00124	1.24047	.78540	45.00
.00613	1.13710	.71995	41.25
.01418	1.03372	.65450	37.50
.02260	.93035	.58905	33.75
.03173	.82698	.52360	30.00
.04263	.72361	.45815	26.25
.05658	.62023	.39270	22.50
.07435	.51686	.32725	18.75
.09546	.41349	.26180	15.00
.11777	.31012	.19635	11.25
.13787	.20674	.13090	7.50
.15194	.10337	.06545	3.75
.15700	.00000	.00000	.00

00 -.02626

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

j=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



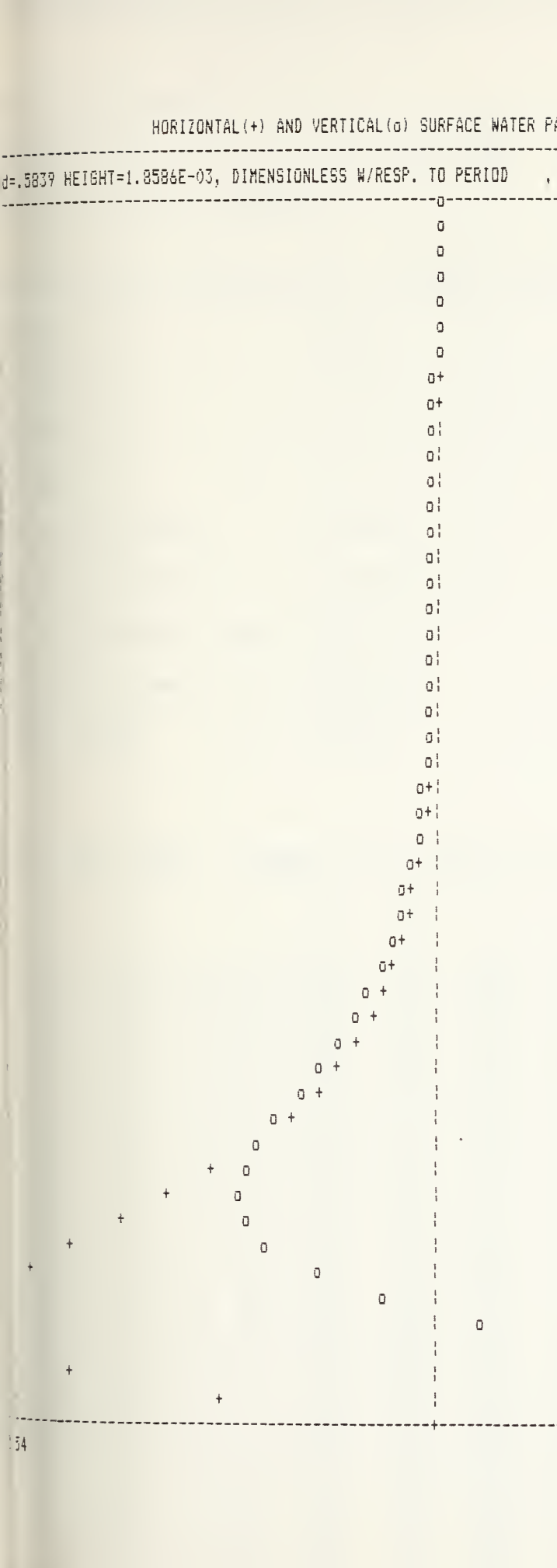
U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.04315	.00000	3.14159	180.00
-.04315	.00001	3.07614	176.25
-.04315	.00001	3.01069	172.50
-.04315	.00002	2.94524	168.75
-.04315	.00003	2.87979	165.00
-.04314	.00004	2.81434	161.25
-.04313	.00006	2.74889	157.50
-.04312	.00007	2.68344	153.75
-.04311	.00009	2.61799	150.00
-.04310	.00012	2.55254	146.25
-.04308	.00015	2.48709	142.50
-.04306	.00019	2.42164	138.75
-.04302	.00024	2.35619	135.00
-.04298	.00031	2.29074	131.25
-.04293	.00038	2.22529	127.50
-.04287	.00048	2.15984	123.75
-.04280	.00061	2.09440	120.00
-.04270	.00077	2.02895	116.25
-.04257	.00097	1.96350	112.50
-.04242	.00122	1.89805	108.75
-.04222	.00154	1.83260	105.00
-.04197	.00194	1.76715	101.25
-.04166	.00244	1.70170	97.50
-.04126	.00307	1.63625	93.75
-.04075	.00386	1.57080	90.00
-.04011	.00485	1.50535	86.25
-.03931	.00609	1.43990	82.50
-.03830	.00764	1.37445	78.75
-.03704	.00960	1.30900	75.00
-.03546	.01203	1.24355	71.25
-.03345	.01504	1.17810	67.50
-.03087	.01874	1.11265	63.75
-.02756	.02323	1.04720	60.00
-.02334	.02868	.98175	56.25
-.01804	.03528	.91630	52.50
-.01146	.04324	.85085	48.75
-.00325	.05275	.78540	45.00
.00707	.06382	.71995	41.25
.02018	.07622	.65450	37.50
.03680	.08940	.58905	33.75
.05754	.10260	.52360	30.00
.08282	.11499	.45815	26.25
.11300	.12565	.39270	22.50
.14863	.13311	.32725	18.75
.19009	.13456	.26180	15.00
.23622	.12536	.19635	11.25
.28199	.10010	.13090	7.50
.31741	.05650	.06545	3.75
.33097	.00000	.00000	.00

97

-.04315

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax	Ay	DIST.	ANGLE
*1/6	*1/6	*K	DEGREES
.00000	.00007	3.14159	180.00
.00001	.00007	3.07614	176.25
.00002	.00008	3.01069	172.50
.00004	.00009	2.94524	168.75
.00005	.00011	2.87979	165.00
.00007	.00012	2.81434	161.25
.00008	.00015	2.74889	157.50
.00010	.00018	2.68344	153.75
.00013	.00023	2.61799	150.00
.00017	.00030	2.55254	146.25
.00022	.00038	2.48709	142.50
.00029	.00047	2.42164	138.75
.00037	.00058	2.35619	135.00
.00046	.00072	2.29074	131.25
.00057	.00091	2.22529	127.50
.00070	.00115	2.15984	123.75
.00089	.00146	2.09440	120.00
.00113	.00185	2.02895	116.25
.00144	.00233	1.96350	112.50
.00183	.00292	1.89805	108.75
.00231	.00366	1.83260	105.00
.00289	.00460	1.76715	101.25
.00362	.00578	1.70170	97.50
.00456	.00727	1.63625	93.75
.00577	.00912	1.57080	90.00
.00731	.01141	1.50535	86.25
.00925	.01424	1.43990	82.50
.01165	.01776	1.37445	78.75
.01464	.02212	1.30900	75.00
.01838	.02747	1.24355	71.25
.02314	.03394	1.17810	67.50
.02922	.04160	1.11265	63.75
.03695	.05051	1.04720	60.00
.04664	.06070	.98175	56.25
.05860	.07220	.91630	52.50
.07322	.08484	.85085	48.75
.09101	.09810	.78540	45.00
.11258	.11074	.71995	41.25
.13829	.12057	.65450	37.50
.16774	.12465	.58905	33.75
.19951	.11989	.52360	30.00
.23136	.10381	.45815	26.25
.26072	.07459	.39270	22.50
.28420	.03062	.32725	18.75
.29554	-.02934	.26180	15.00
.28321	-.10368	.19635	11.25
.23198	-.18302	.13090	7.50
.13332	-.24719	.06545	3.75
.00000	-.27229	.00000	.00

-.27229

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

EPTH: FINITE, HEIGHT/DEPTH= .5839

AVE HEIGHT 1.858611E-03,DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .00

OLUTION OF ORDER 15 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

WATER DEPTH	.31349
WAVE HEIGHT	.18305
WAVE PERIOD	9.9241
WAVE SPEED	.63312
MEAN EULERIAN FLUID SPEED	4.98518E-23
MEAN MASS TRANSPORT SPEED	1.29704E-02
MEAN FLUID SPEED RELATIVE TO WAVE	.63312
VOLUME FLUX DUE TO WAVES	4.06611E-03
BERNOULLI CONSTANT	.20267

LUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.15703	.33101	.00000	.00000	-.27275	.00000	.1095644	.0000000	.0515524	.0000000	.0000000	.0000000	.0000000	.0000000
.13743	.31413	.00000	.00000	-.26169	.01436	.0986763	.0000000	.0444948	.0000000	.0020413	.0000000	.0009415	.0000000
.11782	.29879	.00000	.00000	-.24940	.02896	.0892731	.0000000	.0385045	.0000000	.0038837	.0000000	.0017551	.0000000
.09822	.28483	.00000	.00000	-.23635	.04380	.0811297	.0000000	.0334016	.0000000	.0055540	.0000000	.0024600	.0000000
.07861	.27214	.00000	.00000	-.22288	.05890	.0740591	.0000000	.0290387	.0000000	.0070753	.0000000	.0030720	.0000000
.05901	.26059	.00000	.00000	-.20927	.07427	.0679059	.0000000	.0252947	.0000000	.0084669	.0000000	.0036047	.0000000
.03940	.25008	.00000	.00000	-.19569	.08991	.0625404	.0000000	.0220699	.0000000	.0097456	.0000000	.0040689	.0000000
.01980	.24053	.00000	.00000	-.18228	.10581	.0578537	.0000000	.0192818	.0000000	.0109258	.0000000	.0044743	.0000000
.00019	.23185	.00000	.00000	-.16913	.12197	.0537548	.0000000	.0168619	.0000000	.0120198	.0000000	.0048286	.0000000
-.01941	.22398	.00000	.00000	-.15630	.13838	.0501668	.0000000	.0147529	.0000000	.0130385	.0000000	.0051385	.0000000
-.03902	.21685	.00000	.00000	-.14382	.15505	.0470250	.0000000	.0129070	.0000000	.0139912	.0000000	.0054096	.0000000
-.05863	.21042	.00000	.00000	-.13171	.17195	.0442746	.0000000	.0112841	.0000000	.0148862	.0000000	.0056468	.0000000
-.07823	.20462	.00000	.00000	-.11996	.18909	.0418695	.0000000	.0098502	.0000000	.0157306	.0000000	.0058539	.0000000
-.09784	.19942	.00000	.00000	-.10858	.20646	.0397703	.0000000	.0085767	.0000000	.0165309	.0000000	.0060346	.0000000
-.11744	.19479	.00000	.00000	-.09754	.22404	.0379440	.0000000	.0074389	.0000000	.0172927	.0000000	.0061916	.0000000
-.13705	.19069	.00000	.00000	-.08683	.24184	.0363625	.0000000	.0064160	.0000000	.0180211	.0000000	.0063274	.0000000
-.15665	.18709	.00000	.00000	-.07641	.25985	.0350021	.0000000	.0054898	.0000000	.0187207	.0000000	.0064441	.0000000
-.17626	.18397	.00000	.00000	-.06626	.27805	.0338432	.0000000	.0046445	.0000000	.0193955	.0000000	.0065434	.0000000
-.19586	.18130	.00000	.00000	-.05634	.29646	.0328690	.0000000	.0038664	.0000000	.0200495	.0000000	.0066269	.0000000
-.21547	.17907	.00000	.00000	-.04664	.31505	.0320661	.0000000	.0031433	.0000000	.0206860	.0000000	.0066956	.0000000
-.23507	.17727	.00000	.00000	-.03710	.33384	.0314234	.0000000	.0024642	.0000000	.0213084	.0000000	.0067505	.0000000
-.25468	.17588	.00000	.00000	-.02770	.35281	.0309322	.0000000	.0018193	.0000000	.0219196	.0000000	.0067925	.0000000
-.27428	.17489	.00000	.00000	-.01841	.37196	.0305859	.0000000	.0011993	.0000000	.0225226	.0000000	.0068221	.0000000
-.29389	.17430	.00000	.00000	-.00919	.39129	.0303799	.0000000	.0005956	.0000000	.0231203	.0000000	.0068397	.0000000
-.31349	.17410	.00000	.00000	.00000	.41081	.0303115	.0000000	.0000000	.0000000	.0237152	.0000000	.0068455	.0000000

LUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.09455	.18980	.13386	.29375	-.02956	.00089	.0360235	.2937495	.0146991	.1198621	.0000000	.0000000	.0000000	.0000000
.07755	.18574	.12419	.27456	-.03617	.01733	.0344984	.2745564	.0134903	.1073626	.0005995	.0048311	.0002396	.0019316
.06055	.18187	.11517	.25693	-.04109	.03367	.0330760	.2569256	.0123717	.0961000	.0011739	.0093492	.0004595	.0036612
.04355	.17819	.10674	.24075	-.04459	.04994	.0317522	.2407454	.0113367	.0859549	.0017250	.0135798	.0006610	.0052088
.02654	.17471	.09884	.22591	-.04689	.06617	.0305227	.2259116	.0103788	.0768178	.0022544	.0175468	.0008456	.0065926
.00954	.17141	.09143	.21233	-.04819	.08236	.0293830	.2123275	.0094917	.0685888	.0027637	.0212722	.0010145	.0078286
-.00746	.16831	.08446	.19990	-.04863	.09854	.0283290	.1999035	.0086696	.0611767	.0032543	.0247765	.0011689	.0089318
-.02446	.16540	.07789	.18856	-.04837	.11471	.0273564	.1885572	.0079068	.0544986	.0037277	.0280788	.0013098	.0099151
-.04146	.16267	.07168	.17821	-.04751	.13090	.0264611	.1782132	.0071982	.0484790	.0041851	.0311966	.0014382	.0107905
-.05846	.16012	.06580	.16880	-.04615	.14710	.0256393	.1688023	.0065387	.0430490	.0046280	.0341466	.0015550	.0115686
-.07547	.15776	.06022	.16026	-.04436	.16334	.0248873	.1602616	.0059238	.0381462	.0050576	.0369439	.0016610	.0122588
-.09247	.15557	.05490	.15253	-.04223	.17960	.0242018	.1525341	.0053491	.0337135	.0054749	.0396029	.0017568	.0128697
-.10947	.15356	.04983	.14557	-.03981	.19590	.0235795	.1455680	.0048107	.0296989	.0058811	.0421371	.0018432	.0134087
-.12647	.15172	.04497	.13932	-.03713	.21225	.0230175	.1393169	.0043047	.0260549	.0062772	.0445588	.0019207	.0138827
-.14347	.15004	.04031	.13374	-.03426	.22865	.0225131	.1337393	.0038276	.0227380	.0066642	.0468801	.0019898	.0142975
-.16048	.14854	.03582	.12880	-.03122	.24509	.0220640	.1287980	.0033761	.0197081	.0070432	.0491119	.0020510	.0146583
-.17748	.14720	.03147	.12446	-.02804	.26159	.0216678	.1244603	.0029471	.0169283	.0074149	.0512648	.0021048	.0149697
-.19448	.14602	.02726	.12070	-.02475	.27814	.0213228	.1206976	.0025377	.0143645	.0077804	.0533488	.0021514	.0152358
-.21148	.14501	.02317	.11749	-.02136	.29475	.0210271	.1174851	.0021450	.0119847	.0081404	.0553736	.0021912	.0154597
-.22848	.14415	.01916	.11480	-.01790	.31142	.0207793	.1148016	.0017664	.0097591	.0084958	.0573482	.0022245	.0156446
-.24548	.14345	.01524	.11263	-.01439	.32815	.0205783	.1126295	.0013995	.0076596	.0088474	.0592816	.0022514	.0157927
-.26249	.14291	.01137	.11095	-.01083	.34493	.0204230	.1109546	.0010417	.0056593	.0091959	.0611823	.0022721	.0159059
-.27949	.14252	.00756	.10977	-.00723	.36178	.0203126	.1097661	.0006907	.0037324	.0095422	.0630586	.0022868	.0159857
-.29649	.14229	.00377	.10906	-.00362	.37869	.0202465	.1090560	.0003442	.0018541	.0098870	.0649188	.0022956	.0160332
-.31349	.14221	.00000	.10882	.00000	.39566	.0202246	.1088198	.0000000	.0000000	.0102310	.0667709	.0022986	.0160490

LUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.03285	.05751	.10302	.20000	.12031	-.00115	.0033075	.2000037	.0011455	.0692694	.0000000	.0000000	.0000000	.0000000
.01842	.05947	.09771	.19608	.10966	.01494	.0035365	.1960780	.0011738	.0650801	.0000494	.0028579	.0000167	.0009694
.00399	.06124	.09252	.19218	.09987	.03088	.0037509	.1921847	.0011908	.0610146	.0001020	.0056594	.0000338	.0018792
-.01044	.06286	.08746	.18835	.09089	.04668	.0039508	.1883532	.0011973	.0570800	.0001575	.0084051	.0000510	.0027313
-.02487	.06431	.08252	.18461	.08263	.06237	.0041364	.1846083	.0011938	.0532811	.0002159	.0110962	.0000683	.0035276
-.03930	.06564	.07769	.18097	.07504	.07793	.0043080	.1809709	.0011812	.0496197	.0002768	.0137340	.0000854	.0042701
-.05374	.06683	.07297	.17746	.06806	.09340	.0044660	.1774588	.0011601	.0460959	.0003401	.0163202	.0001023	.0049607
-.06817	.06790	.06835	.17409	.06164	.10876	.0046110	.1740871	.0011312	.0427078	.0004056	.0188568	.0001188	.0056015
-.08260	.06887	.06383	.17087	.05572	.12404	.0047436	.1708682	.0010953	.0394524	.0004731	.0213458	.0001349	.0061943
-.09703	.06975	.05940	.16781	.05026	.13923	.0048644	.1678126	.0010530	.0363252	.0005424	.0237895	.0001504	.0067411
-.11146	.07053	.05506	.16493	.04522	.15435	.0049740	.1649290	.0010049	.0333209	.0006134	.0261904	.0001653	.0072436
-.12589	.07123	.05079	.16222	.04055	.16940	.0050730	.1622245	.0009517	.0304335	.0006859	.0285509	.0001794	.0077036
-.14032	.07185	.04660	.15971	.03623	.18439	.0051621	.1597050	.0008939	.0276561	.0007598	.0308738	.0001927	.0081227
-.15475	.07240	.04248	.15738	.03221	.19931	.0052417	.1573754	.0008321	.0249817	.0008348	.0331617	.0002051	.0085026
-.16918	.07289	.03842	.15524	.02846	.21418	.0053126	.1552395	.0007667	.0224024	.0009110	.0354173	.0002167	.0088444
-.18361	.07331	.03442	.15330	.02496	.22900	.0053751	.1533004	.0006981	.0199103	.0009881	.0376435	.0002272	.0091498
-.19804	.07369	.03047	.15156	.02167	.24376	.0054297	.1515605	.0006268	.0174972	.0010661	.0398432	.0002368	.0094197
-.21248	.07401	.02656	.15002	.01857	.25848	.0054769	.1500219	.0005533	.0151546	.0011448	.0420193	.0002453	.0096553
-.22691	.07428	.02269	.14869	.01563	.27316	.0055171	.1486861	.0004777	.0128740	.0012241	.0441746	.0002528	.0098575
-.24134	.07450	.01886	.14755	.01282	.28780	.0055505	.1475541	.0004005	.0106467	.0013040	.0463121	.0002591	.0100272
-.25577	.07468	.01505	.14663	.01012	.30239	.0055774	.1466270	.0003219	.0084638	.0013842	.0484347	.0002643	.0101651
-.27020	.07482	.01127	.14591	.00752	.31695	.0055981	.1459052	.0002424	.0063166	.0014649	.0505455	.0002684	.0102717
-.28463	.07492	.00750	.14539	.00497	.33147	.0056128	.1453894	.0001620	.0041962	.0015458	.0526473	.0002713	.0103476
-.29906	.07498	.00375	.14508	.00248	.34596	.0056216	.1450798	.0000811	.0020936	.0016268	.0547432	.0002731	.0103930
-.31349	.07500	.00000	.14498	.00000	.36041	.0056245	.1449766	.0000000	.0000000	.0017080	.0568360	.0002736	.0104081

WATER SURFACE ELEVATION

/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

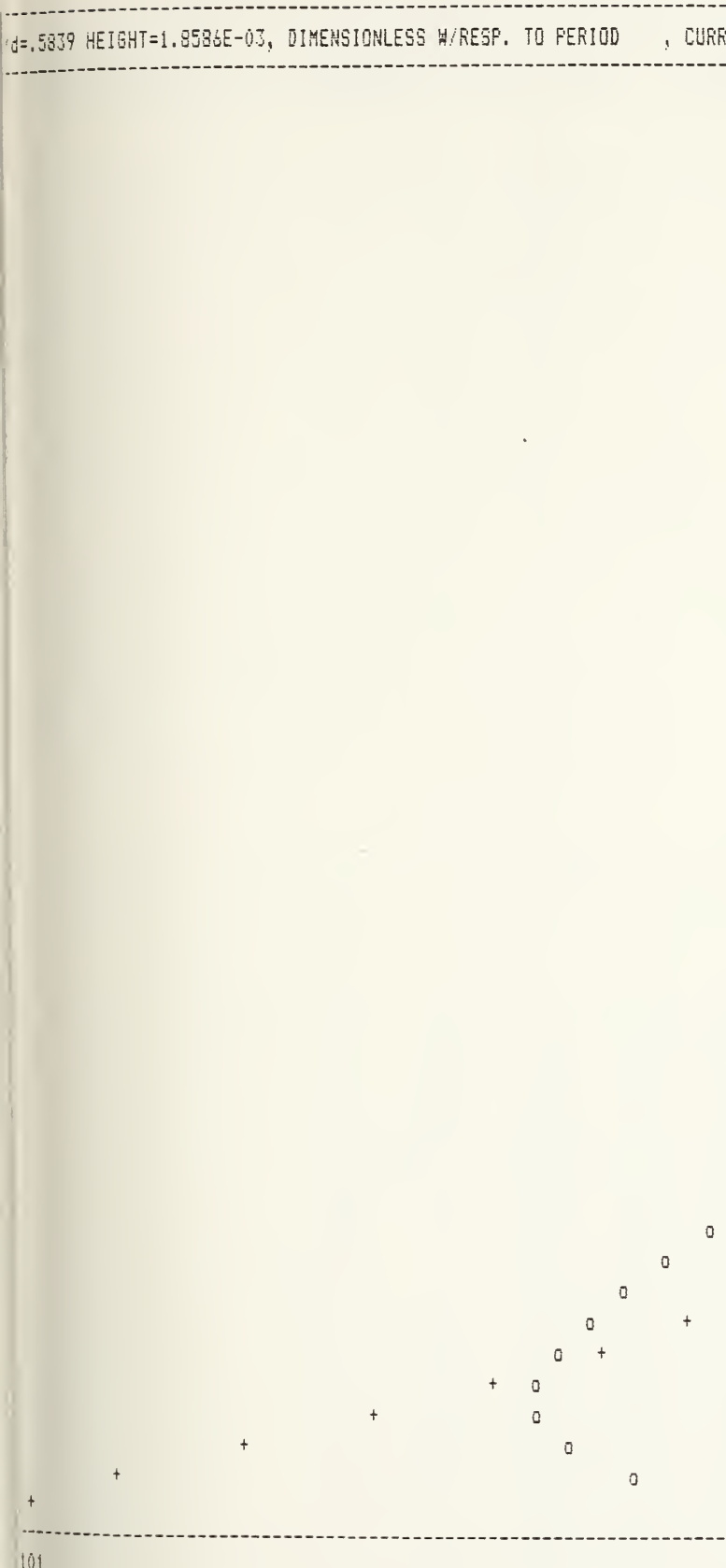
ELEV.VS.	TIME	DIST.	ANGLE
*K	(K*G)^.5	*K	DEGREES
-.02602	4.96205	3.14159	180.00
-.02601	4.85867	3.07614	176.25
-.02600	4.75530	3.01069	172.50
-.02601	4.65192	2.94524	168.75
-.02605	4.54854	2.87979	165.00
-.02607	4.44517	2.81434	161.25
-.02603	4.34179	2.74889	157.50
-.02595	4.23842	2.68344	153.75
-.02590	4.13504	2.61799	150.00
-.02592	4.03166	2.55254	146.25
-.02601	3.92829	2.48709	142.50
-.02608	3.82491	2.42164	138.75
-.02603	3.72154	2.35619	135.00
-.02587	3.61816	2.29074	131.25
-.02571	3.51478	2.22529	127.50
-.02567	3.41141	2.15984	123.75
-.02578	3.30803	2.09440	120.00
-.02589	3.20466	2.02895	116.25
-.02584	3.10128	1.96350	112.50
-.02557	2.99790	1.89805	108.75
-.02520	2.89453	1.83260	105.00
-.02494	2.79115	1.76715	101.25
-.02489	2.68778	1.70170	97.50
-.02492	2.58440	1.63625	93.75
-.02475	2.48102	1.57080	90.00
-.02419	2.37765	1.50535	86.25
-.02330	2.27427	1.43990	82.50
-.02237	2.17090	1.37445	78.75
-.02163	2.06752	1.30900	75.00
-.02098	1.96414	1.24355	71.25
-.02003	1.86077	1.17810	67.50
-.01836	1.75739	1.11265	63.75
-.01585	1.65402	1.04720	60.00
-.01276	1.55064	.98175	56.25
-.00945	1.44726	.91630	52.50
-.00596	1.34389	.85085	48.75
-.00173	1.24051	.78540	45.00
.00402	1.13714	.71995	41.25
.01185	1.03376	.65450	37.50
.02164	.93038	.58905	33.75
.03285	.82701	.52360	30.00
.04514	.72363	.45815	26.25
.05892	.62026	.39270	22.50
.07518	.51688	.32725	18.75
.09455	.41350	.26180	15.00
.11603	.31013	.19635	11.25
.13651	.20675	.13090	7.50
.15150	.10338	.06545	3.75
.15703	.00000	.00000	.00

703

-.02608

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

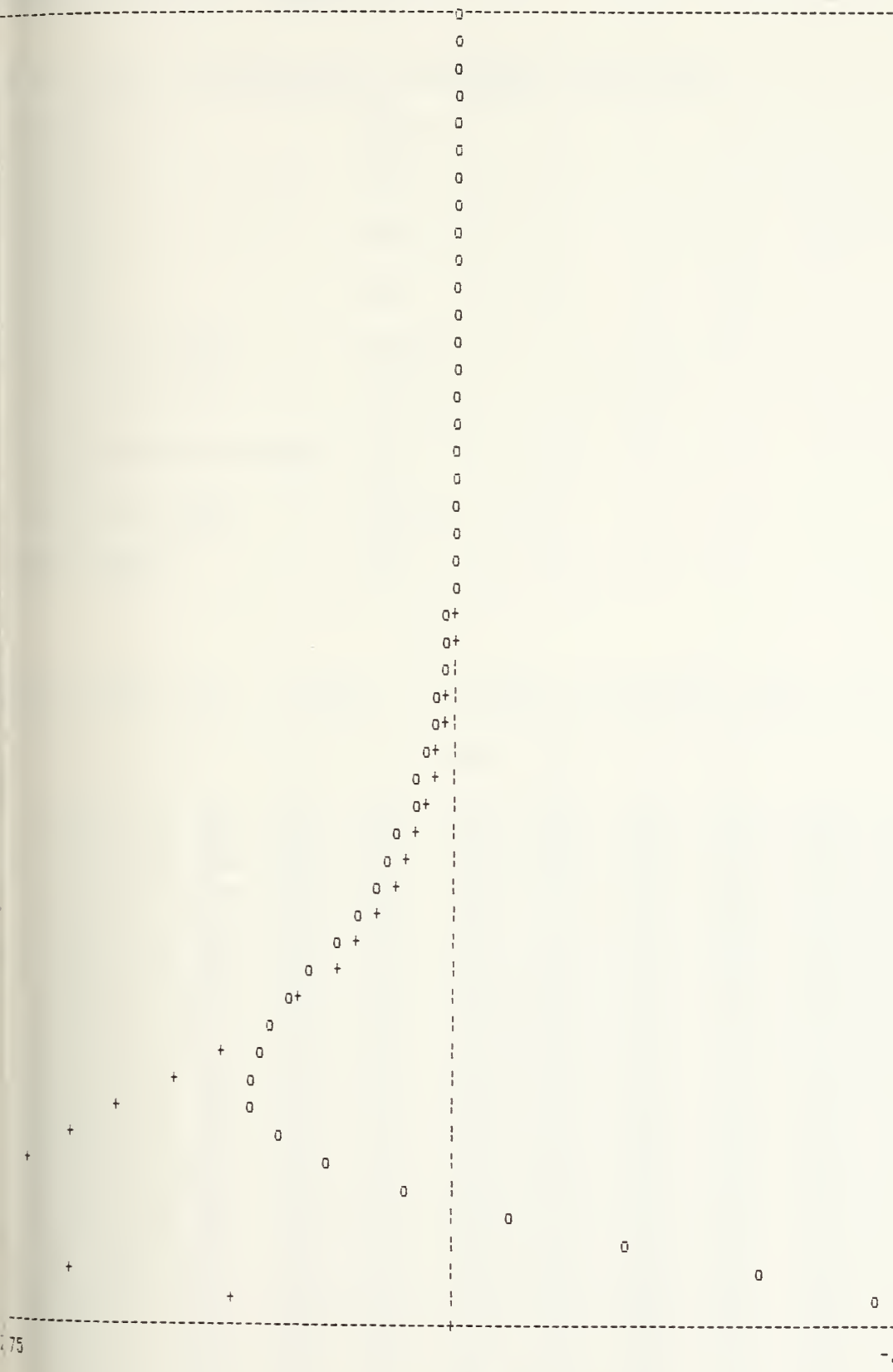


U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.04317	.00000	3.14159	180.00
-.04317	.00001	3.07614	176.25
-.04317	.00001	3.01069	172.50
-.04317	.00002	2.94524	168.75
-.04316	.00003	2.87979	165.00
-.04316	.00004	2.81434	161.25
-.04315	.00006	2.74889	157.50
-.04314	.00007	2.68344	153.75
-.04313	.00009	2.61799	150.00
-.04311	.00012	2.55254	146.25
-.04310	.00015	2.48709	142.50
-.04307	.00019	2.42164	138.75
-.04304	.00024	2.35619	135.00
-.04300	.00031	2.29074	131.25
-.04295	.00039	2.22529	127.50
-.04289	.00048	2.15984	123.75
-.04281	.00061	2.09440	120.00
-.04271	.00077	2.02895	116.25
-.04259	.00097	1.96350	112.50
-.04243	.00123	1.89805	108.75
-.04223	.00154	1.83260	105.00
-.04198	.00194	1.76715	101.25
-.04167	.00244	1.70170	97.50
-.04127	.00307	1.63625	93.75
-.04077	.00387	1.57080	90.00
-.04013	.00486	1.50535	86.25
-.03934	.00612	1.43990	82.50
-.03833	.00767	1.37445	78.75
-.03705	.00961	1.30900	75.00
-.03543	.01202	1.24355	71.25
-.03338	.01500	1.17810	67.50
-.03079	.01870	1.11265	63.75
-.02755	.02326	1.04720	60.00
-.02346	.02883	.98175	56.25
-.01825	.03551	.91630	52.50
-.01159	.04343	.85085	48.75
-.00315	.05271	.78540	45.00
.00744	.06345	.71995	41.25
.02062	.07569	.65450	37.50
.03705	.08914	.58905	33.75
.05751	.10302	.52360	30.00
.08271	.11605	.45815	26.25
.11306	.12672	.39270	22.50
.14874	.13341	.32725	18.75
.18980	.13386	.26180	15.00
.23530	.12427	.19635	11.25
.28096	.09948	.13090	7.50
.31699	.05645	.06545	3.75
.33101	.00000	.00000	.00

-.04317

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax	Ay	DIST.	ANGLE
*1/G	*1/G	*K	DEGREES
.00000	.00007	3.14159	180.00
.00001	.00007	3.07614	176.25
.00002	.00008	3.01069	172.50
.00003	.00009	2.94524	168.75
.00004	.00011	2.87979	165.00
.00006	.00013	2.81434	161.25
.00009	.00016	2.74889	157.50
.00011	.00019	2.68344	153.75
.00014	.00023	2.61799	150.00
.00017	.00029	2.55254	146.25
.00021	.00037	2.48709	142.50
.00028	.00047	2.42164	138.75
.00037	.00059	2.35619	135.00
.00046	.00073	2.29074	131.25
.00058	.00091	2.22529	127.50
.00071	.00115	2.15984	123.75
.00089	.00146	2.09440	120.00
.00113	.00186	2.02895	116.25
.00145	.00234	1.96350	112.50
.00184	.00292	1.89805	108.75
.00231	.00366	1.83260	105.00
.00288	.00459	1.76715	101.25
.00362	.00579	1.70170	97.50
.00457	.00729	1.63625	93.75
.00580	.00915	1.57080	90.00
.00734	.01144	1.50535	86.25
.00924	.01428	1.43990	82.50
.01161	.01779	1.37445	78.75
.01460	.02214	1.30900	75.00
.01844	.02745	1.24355	71.25
.02333	.03386	1.17810	67.50
.02945	.04152	1.11265	63.75
.03705	.05055	1.04720	60.00
.04648	.06099	.98175	56.25
.05826	.07271	.91630	52.50
.07298	.08527	.85085	48.75
.09110	.09797	.78540	45.00
.11294	.10980	.71995	41.25
.13861	.11920	.65450	37.50
.16795	.12381	.58905	33.75
.20000	.12031	.52360	30.00
.23249	.10516	.45815	26.25
.26195	.07574	.39270	22.50
.28425	.03085	.32725	18.75
.29375	-.02956	.26180	15.00
.28076	-.10342	.19635	11.25
.23086	-.18235	.13090	7.50
.13361	-.24710	.06545	3.75
.00000	-.27275	.00000	.00

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

DEPTH: FINITE, HEIGHT/DEPTH= .5839

WAVE HEIGHT 1.858611E-03,DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .0000

SOLUTION OF ORDER 17 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

WATER DEPTH	.31350
WAVE HEIGHT	.18305
WAVE PERIOD	9.9242
WAVE SPEED	.63312
MEAN EULERIAN FLUID SPEED	-7.59017E-22
MEAN MASS TRANSPORT SPEED	1.29619E-02
MEAN FLUID SPEED RELATIVE TO WAVE	.63312
VOLUME FLUX DUE TO WAVES	4.06351E-03
BERNOULLI CONSTANT	.20267

SOLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.15703	.33100	.00000	.00000	-.27304	.00000	.1095636	.0000000	.0515530	.0000000	.0000000	.0000000	.0000000	.0000000
.13743	.31411	.00000	.00000	-.26188	.01436	.0986661	.0000000	.0444910	.0000000	.0020412	.0000000	.0009415	.0000000
.11782	.29876	.00000	.00000	-.24950	.02895	.0892587	.0000000	.0384991	.0000000	.0038834	.0000000	.0017550	.0000000
.09822	.28481	.00000	.00000	-.23639	.04379	.0811141	.0000000	.0333958	.0000000	.0055535	.0000000	.0024598	.0000000
.07861	.27211	.00000	.00000	-.22288	.05889	.0740440	.0000000	.0290333	.0000000	.0070745	.0000000	.0030718	.0000000
.05901	.26056	.00000	.00000	-.20924	.07426	.0678922	.0000000	.0252901	.0000000	.0084658	.0000000	.0036043	.0000000
.03940	.25006	.00000	.00000	-.19564	.08990	.0625284	.0000000	.0220661	.0000000	.0097443	.0000000	.0040685	.0000000
.01980	.24051	.00000	.00000	-.18222	.10580	.0578436	.0000000	.0192789	.0000000	.0109243	.0000000	.0044738	.0000000
.00019	.23183	.00000	.00000	-.16907	.12197	.0537466	.0000000	.0168596	.0000000	.0120182	.0000000	.0048280	.0000000
-.01942	.22396	.00000	.00000	-.15624	.13838	.0501603	.0000000	.0147512	.0000000	.0130367	.0000000	.0051379	.0000000
-.03902	.21684	.00000	.00000	-.14376	.15505	.0470200	.0000000	.0129059	.0000000	.0139894	.0000000	.0054090	.0000000
-.05863	.21041	.00000	.00000	-.13165	.17195	.0442710	.0000000	.0112834	.0000000	.0148843	.0000000	.0056462	.0000000
-.07823	.20461	.00000	.00000	-.11991	.18909	.0418670	.0000000	.0098499	.0000000	.0157287	.0000000	.0058533	.0000000
-.09784	.19942	.00000	.00000	-.10853	.20646	.0397688	.0000000	.0085765	.0000000	.0165289	.0000000	.0060339	.0000000
-.11744	.19479	.00000	.00000	-.09750	.22405	.0379433	.0000000	.0074390	.0000000	.0172907	.0000000	.0061909	.0000000
-.13705	.19069	.00000	.00000	-.08679	.24185	.0363625	.0000000	.0064161	.0000000	.0180191	.0000000	.0063268	.0000000
-.15665	.18709	.00000	.00000	-.07637	.25985	.0350027	.0000000	.0054900	.0000000	.0187187	.0000000	.0064435	.0000000
-.17626	.18397	.00000	.00000	-.06623	.27806	.0338442	.0000000	.0046447	.0000000	.0193936	.0000000	.0065428	.0000000
-.19586	.18130	.00000	.00000	-.05632	.29647	.0328705	.0000000	.0038666	.0000000	.0200476	.0000000	.0066263	.0000000
-.21547	.17908	.00000	.00000	-.04662	.31506	.0320679	.0000000	.0031435	.0000000	.0206841	.0000000	.0066950	.0000000
-.23508	.17727	.00000	.00000	-.03709	.33385	.0314254	.0000000	.0024644	.0000000	.0213065	.0000000	.0067499	.0000000
-.25468	.17588	.00000	.00000	-.02769	.35282	.0309343	.0000000	.0018194	.0000000	.0219178	.0000000	.0067919	.0000000
-.27429	.17489	.00000	.00000	-.01840	.37197	.0305882	.0000000	.0011994	.0000000	.0225209	.0000000	.0068215	.0000000
-.29389	.17431	.00000	.00000	-.00918	.39131	.0303823	.0000000	.0005957	.0000000	.0231186	.0000000	.0068391	.0000000
-.31350	.17411	.00000	.00000	.00000	.41082	.0303139	.0000000	.0000000	.0000000	.0237136	.0000000	.0068450	.0000000

SOLUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

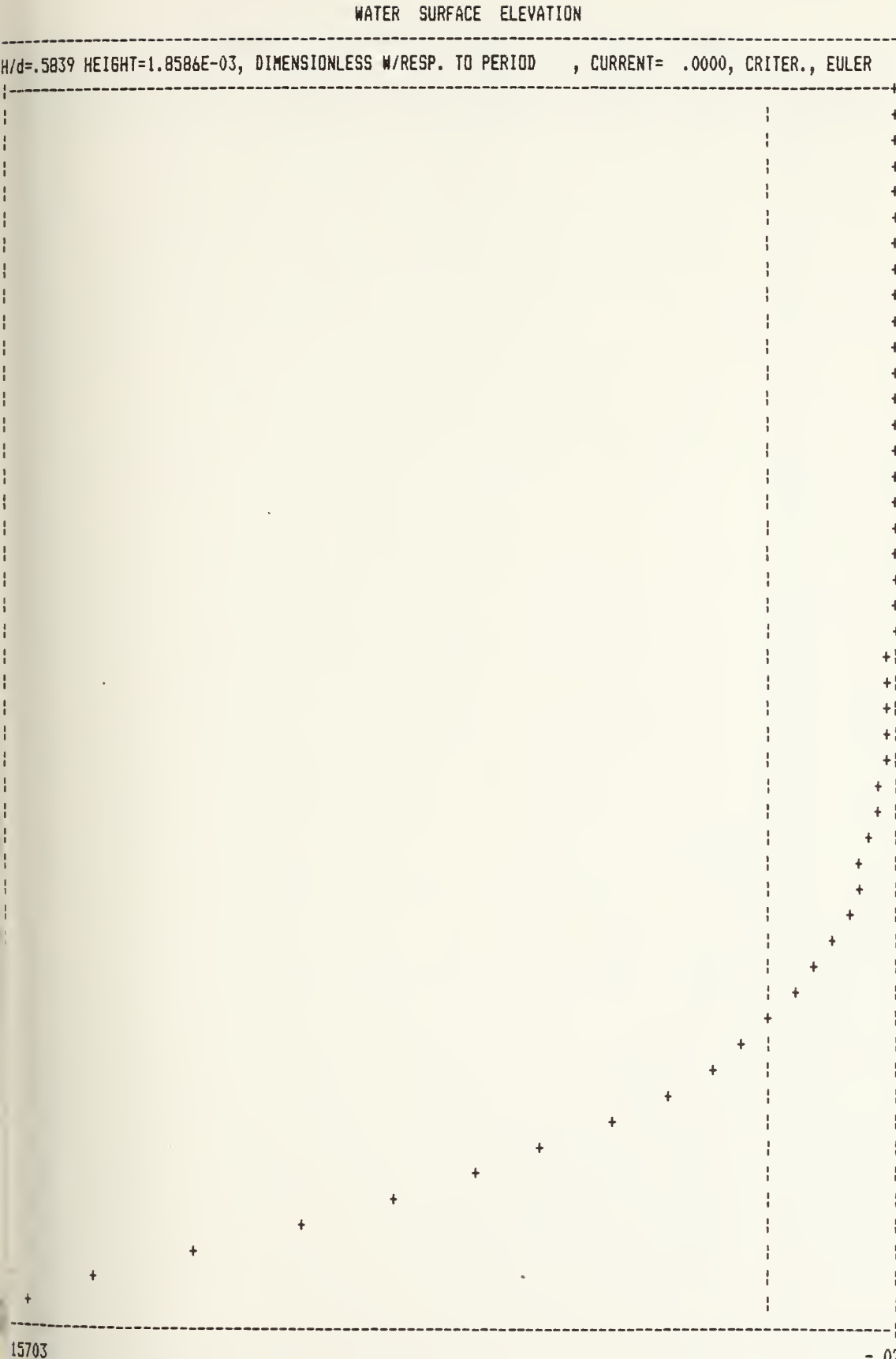
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.09474	.18989	.13386	.29337	-.02979	.00074	.0360597	.2933661	.0147211	.1197642	.0000000	.0000000	.0000000	.0000000
.07773	.18583	.12420	.27426	-.03636	.01719	.0345311	.2742639	.0135097	.1073007	.0006004	.0048277	.0002401	.0019312
.06072	.18195	.11519	.25670	-.04126	.03353	.0331054	.2567011	.0123888	.0960631	.0011756	.0093436	.0004604	.0036608
.04371	.17827	.10676	.24057	-.04473	.04981	.0317786	.2405717	.0113517	.0859350	.0017275	.0135729	.0006623	.0052097
.02670	.17478	.09886	.22578	-.04702	.06604	.0305464	.2257758	.0103919	.0768092	.0022575	.0175392	.0008472	.0065929
.00969	.17148	.09145	.21222	-.04830	.08224	.0294043	.2122198	.0095032	.0685876	.0027674	.0212644	.0010164	.0078295
-.00732	.16837	.08448	.19982	-.04873	.09842	.0283480	.1998166	.0086796	.0611801	.0032586	.0247688	.0011711	.0089331
-.02433	.16545	.07790	.18849	-.04846	.11460	.0273735	.1884858	.0079156	.0545046	.0037325	.0280713	.0013122	.0099170
-.04134	.16272	.07169	.17815	-.04759	.13080	.0264765	.1781530	.0072059	.0484863	.0041905	.0311896	.0014408	.0107930
-.05835	.16017	.06581	.16875	-.04622	.14701	.0256531	.1687503	.0065454	.0430568	.0046339	.0341400	.0015578	.0115716
-.07536	.15780	.06023	.16022	-.04443	.16325	.0248998	.1602156	.0059297	.0381539	.0050638	.0369379	.0016639	.0122623
-.09237	.15561	.05492	.15249	-.04229	.17952	.0242130	.1524923	.0053543	.0337208	.0054815	.0395974	.0017598	.0128736
-.10938	.15359	.04984	.14553	-.03985	.19583	.0235897	.1455292	.0048151	.0297055	.0058881	.0421321	.0018463	.0134130
-.12639	.15175	.04498	.13928	-.03718	.21218	.0230268	.1392802	.0043086	.0260608	.0062846	.0445544	.0019239	.0138873
-.14340	.15007	.04032	.13370	-.03430	.22859	.0225216	.1337040	.0038309	.0227431	.0066720	.0468762	.0019932	.0143024
-.16041	.14857	.03583	.12876	-.03125	.24504	.0220717	.1287637	.0033790	.0197125	.0070512	.0491085	.0020545	.0146635
-.17742	.14722	.03148	.12443	-.02807	.26154	.0216750	.1244266	.0029495	.0169320	.0074233	.0512619	.0021083	.0149751
-.19443	.14605	.02727	.12066	-.02477	.27811	.0213294	.1206643	.0025397	.0143676	.0077891	.0533464	.0021550	.0152413
-.21144	.14503	.02317	.11745	-.02138	.29472	.0210333	.1174519	.0021467	.0119872	.0081494	.0553716	.0021948	.0154655
-.22845	.14417	.01917	.11477	-.01792	.31140	.0207852	.1147685	.0017678	.0097611	.0085050	.0573466	.0022281	.0156504
-.24546	.14347	.01524	.11260	-.01440	.32813	.0205838	.1125965	.0014005	.0076611	.0088569	.0592804	.0022551	.0157986
-.26247	.14293	.01138	.11092	-.01084	.34493	.0204283	.1109217	.0010425	.0056604	.0092057	.0611814	.0022759	.0159119
-.27948	.14254	.00756	.10973	-.00724	.36179	.0203177	.1097331	.0006912	.0037331	.0095522	.0630581	.0022906	.0159918
-.29649	.14231	.00377	.10902	-.00363	.37870	.0202516	.1090230	.0003445	.0018545	.0098973	.0649186	.0022994	.0160393
-.31350	.14223	.00000	.10879	.00000	.39568	.0202296	.1087868	.0000000	.0000000	.0102416	.0667711	.0023023	.0160551

SOLUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.03214	.05763	.10279	.20002	.11994	-.00034	.0033212	.2000171	.0011479	.0691327	.0000000	.0000000	.0000000	.0000000
.01774	.05958	.09749	.19606	.10931	.01571	.0035494	.1960648	.0011757	.0649431	.0000495	.0028521	.0000167	.0009654
.00333	.06134	.09232	.19215	.09955	.03161	.0037631	.1921527	.0011923	.0608800	.0001021	.0056475	.0000338	.0018715
-.01107	.06295	.08727	.18831	.09059	.04738	.0039622	.1883083	.0011983	.0569501	.0001578	.0083871	.0000510	.0027199
-.02547	.06440	.08234	.18456	.08236	.06303	.0041470	.1845552	.0011944	.0531572	.0002161	.0110720	.0000682	.0035128
-.03987	.06571	.07752	.18091	.07479	.07856	.0043178	.1809135	.0011815	.0495028	.0002771	.0137036	.0000853	.0042520
-.05427	.06690	.07281	.17740	.06784	.09399	.0044751	.1774000	.0011601	.0459866	.0003404	.0162837	.0001022	.0049396
-.06867	.06797	.06820	.17403	.06143	.10932	.0046194	.1740291	.0011309	.0426065	.0004059	.0188143	.0001187	.0055775
-.08307	.06893	.06369	.17081	.05554	.12456	.0047513	.1708126	.0010948	.0393591	.0004734	.0212974	.0001347	.0061677
-.09748	.06980	.05927	.16776	.05010	.13972	.0048715	.1677607	.0010524	.0362399	.0005427	.0237353	.0001502	.0067121
-.11188	.07057	.05494	.16488	.04507	.15481	.0049806	.1648816	.0010042	.0332434	.0006136	.0261306	.0001650	.0072124
-.12628	.07127	.05069	.16218	.04042	.16983	.0050791	.1621822	.0009509	.0303635	.0006860	.0284857	.0001791	.0076704
-.14068	.07189	.04651	.15967	.03612	.18478	.0051677	.1596681	.0008931	.0275934	.0007598	.0308032	.0001923	.0080878
-.15508	.07244	.04239	.15734	.03211	.19967	.0052470	.1573439	.0008312	.0249257	.0008348	.0330860	.0002048	.0084659
-.16948	.07292	.03834	.15521	.02838	.21451	.0053175	.1552133	.0007658	.0223529	.0009109	.0353366	.0002163	.0088064
-.18388	.07335	.03435	.15328	.02489	.22929	.0053797	.1532793	.0006973	.0198670	.0009879	.0375580	.0002268	.0091104
-.19829	.07372	.03041	.15154	.02161	.24403	.0054341	.1515443	.0006261	.0174596	.0010658	.0397529	.0002363	.0093792
-.21269	.07403	.02651	.15001	.01852	.25872	.0054810	.1500101	.0005525	.0151225	.0011444	.0419243	.0002448	.0096139
-.22709	.07430	.02265	.14868	.01558	.27337	.0055210	.1486782	.0004771	.0128471	.0012236	.0440751	.0002522	.0098152
-.24149	.07453	.01882	.14755	.01278	.28797	.0055542	.1475496	.0003999	.0106246	.0013034	.0462081	.0002585	.0099842
-.25589	.07471	.01502	.14663	.01010	.30254	.0055810	.1466253	.0003215	.0084465	.0013835	.0483264	.0002637	.0101215
-.27029	.07484	.01125	.14591	.00750	.31706	.0056016	.1459059	.0002420	.0063038	.0014641	.0504328	.0002678	.0102277
-.28469	.07494	.00749	.14539	.00496	.33156	.0056162	.1453917	.0001618	.0041877	.0015448	.0525304	.0002707	.0103033
-.29910	.07500	.00374	.14508	.00247	.34601	.0056250	.1450830	.0000810	.0020894	.0016258	.0546220	.0002724	.0103485

WATER SURFACE ELEVATION

H/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



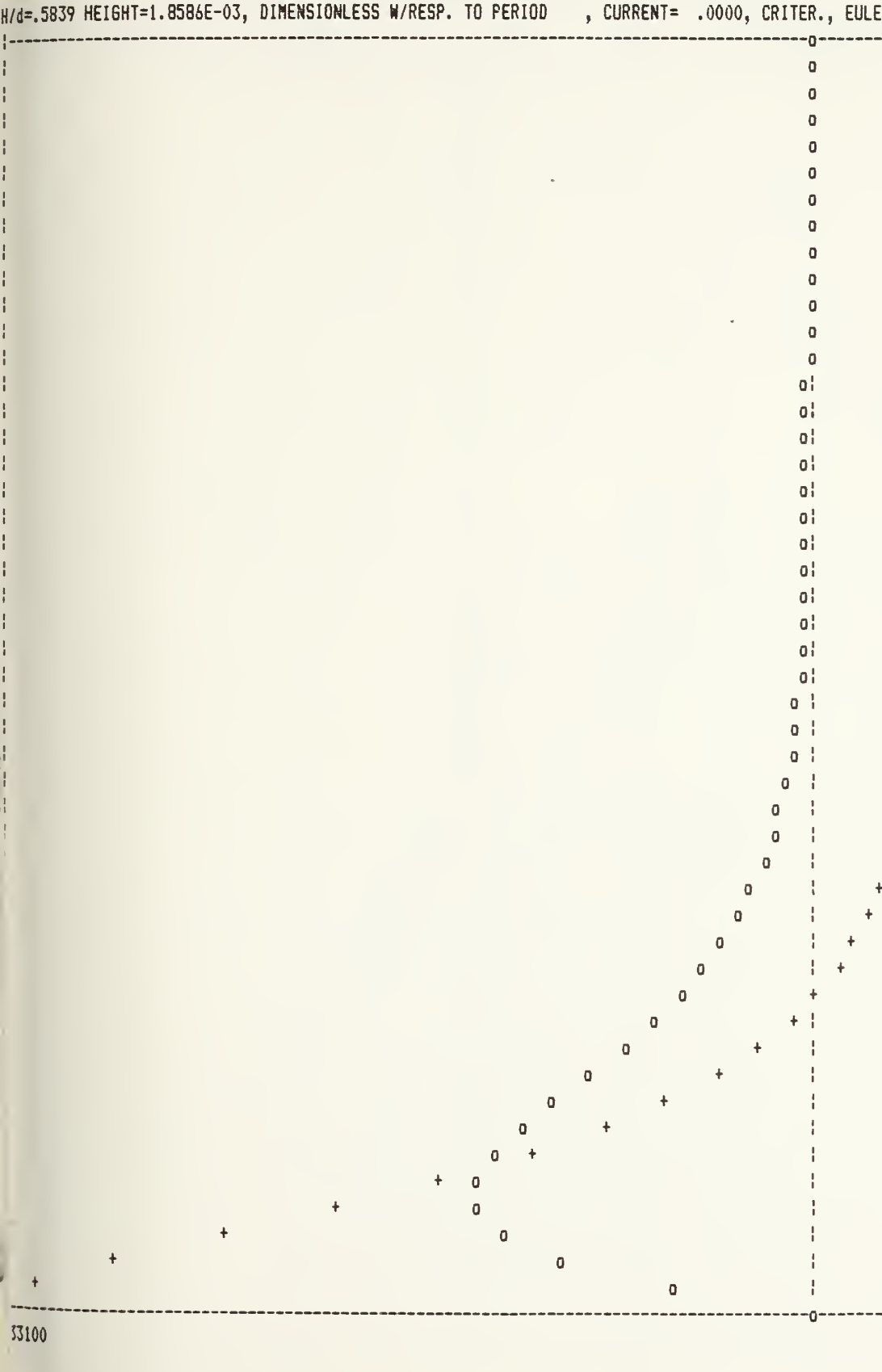
ELEV.VS.	TIME	DIST.	ANGLE
‡K	(K‡G)^.5	‡K	DEGREES
-.02602	4.96210	3.14159	180.00
-.02601	4.85872	3.07614	176.25
-.02601	4.75534	3.01069	172.50
-.02602	4.65196	2.94524	168.75
-.02604	4.54859	2.87979	165.00
-.02603	4.44521	2.81434	161.25
-.02599	4.34183	2.74889	157.50
-.02595	4.23846	2.68344	153.75
-.02596	4.13508	2.61799	150.00
-.02602	4.03170	2.55254	146.25
-.02604	3.92833	2.48709	142.50
-.02598	3.82495	2.42164	138.75
-.02587	3.72157	2.35619	135.00
-.02582	3.61819	2.29074	131.25
-.02586	3.51482	2.22529	127.50
-.02592	3.41144	2.15984	123.75
-.02588	3.30806	2.09440	120.00
-.02570	3.20469	2.02895	116.25
-.02550	3.10131	1.96350	112.50
-.02541	2.99793	1.89805	108.75
-.02543	2.89456	1.83260	105.00
-.02538	2.79118	1.76715	101.25
-.02511	2.68780	1.70170	97.50
-.02466	2.58442	1.63625	93.75
-.02420	2.48105	1.57080	90.00
-.02389	2.37767	1.50535	86.25
-.02359	2.27429	1.43990	82.50
-.02302	2.17092	1.37445	78.75
-.02201	2.06754	1.30900	75.00
-.02068	1.96416	1.24355	71.25
-.01929	1.86079	1.17810	67.50
-.01789	1.75741	1.11265	63.75
-.01614	1.65403	1.04720	60.00
-.01357	1.55065	.98175	56.25
-.01001	1.44728	.91630	52.50
-.00569	1.34390	.85085	48.75
-.00086	1.24052	.78540	45.00
.00469	1.13715	.71995	41.25
.01168	1.03377	.65450	37.50
.02080	.93039	.58905	33.75
.03214	.82702	.52360	30.00
.04521	.72364	.45815	26.25
.05970	.62026	.39270	22.50
.07597	.51688	.32725	18.75
.09474	.41351	.26180	15.00
.11564	.31013	.19635	11.25
.13602	.20675	.13090	7.50
.15131	.10338	.06545	3.75
.15703	.00000	.00000	.00

15703

-.02604

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

H/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



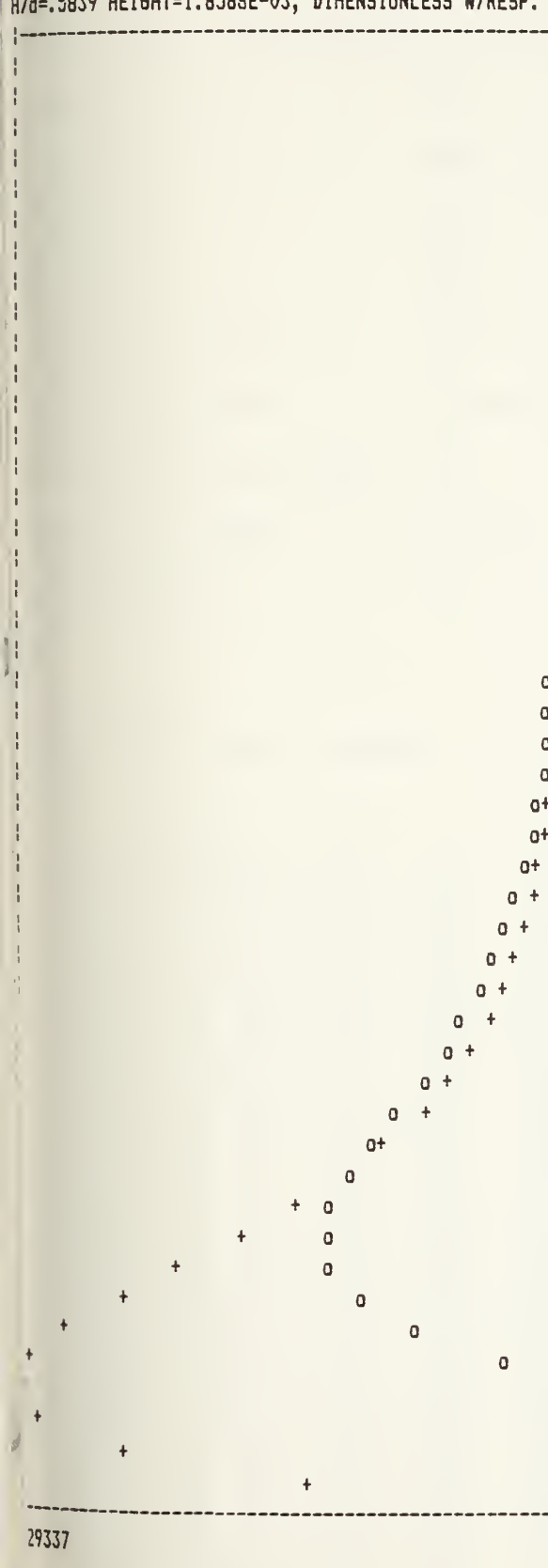
U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.04318	.00000	3.14159	180.00
-.04318	.00001	3.07614	176.25
-.04318	.00001	3.01069	172.50
-.04318	.00002	2.94524	168.75
-.04317	.00003	2.87979	165.00
-.04317	.00004	2.81434	161.25
-.04316	.00006	2.74889	157.50
-.04315	.00007	2.68344	153.75
-.04314	.00009	2.61799	150.00
-.04312	.00012	2.55254	146.25
-.04311	.00015	2.48709	142.50
-.04308	.00019	2.42164	138.75
-.04305	.00024	2.35619	135.00
-.04301	.00030	2.29074	131.25
-.04296	.00038	2.22529	127.50
-.04290	.00048	2.15984	123.75
-.04282	.00061	2.09440	120.00
-.04272	.00077	2.02895	116.25
-.04260	.00097	1.96350	112.50
-.04244	.00122	1.89805	108.75
-.04224	.00154	1.83260	105.00
-.04199	.00194	1.76715	101.25
-.04168	.00245	1.70170	97.50
-.04128	.00308	1.63625	93.75
-.04078	.00387	1.57080	90.00
-.04014	.00487	1.50535	86.25
-.03934	.00611	1.43990	82.50
-.03833	.00767	1.37445	78.75
-.03705	.00962	1.30900	75.00
-.03544	.01204	1.24355	71.25
-.03341	.01504	1.17810	67.50
-.03082	.01872	1.11265	63.75
-.02754	.02325	1.04720	60.00
-.02340	.02878	.98175	56.25
-.01819	.03549	.91630	52.50
-.01161	.04349	.85085	48.75
-.00325	.05286	.78540	45.00
.00736	.06359	.71995	41.25
.02066	.07565	.65450	37.50
.03719	.08890	.58905	33.75
.05763	.10279	.52360	30.00
.08276	.11613	.45815	26.25
.11314	.12713	.39270	22.50
.14891	.13380	.32725	18.75
.18989	.13386	.26180	15.00
.23508	.12393	.19635	11.25
.28054	.09922	.13090	7.50
.31678	.05643	.06545	3.75
.33100	.00000	.00000	.00

33100

-.04318

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

H/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax ‡1/G	Ay ‡1/G	DIST. ‡K	ANGLE DEGREES
.00000	.00007	3.14159	180.00
.00001	.00007	3.07614	176.25
.00002	.00008	3.01069	172.50
.00003	.00009	2.94524	168.75
.00005	.00011	2.87979	165.00
.00007	.00013	2.81434	161.25
.00009	.00015	2.74889	157.50
.00011	.00018	2.68344	153.75
.00013	.00023	2.61799	150.00
.00017	.00030	2.55254	146.25
.00022	.00038	2.48709	142.50
.00029	.00047	2.42164	138.75
.00037	.00057	2.35619	135.00
.00045	.00072	2.29074	131.25
.00056	.00092	2.22529	127.50
.00071	.00117	2.15984	123.75
.00092	.00148	2.09440	120.00
.00116	.00184	2.02895	116.25
.00145	.00230	1.96350	112.50
.00180	.00290	1.89805	108.75
.00227	.00368	1.83260	105.00
.00289	.00464	1.76715	101.25
.00367	.00582	1.70170	97.50
.00462	.00727	1.63625	93.75
.00579	.00911	1.57080	90.00
.00728	.01142	1.50535	86.25
.00920	.01431	1.43990	82.50
.01165	.01785	1.37445	78.75
.01471	.02217	1.30900	75.00
.01850	.02744	1.24355	71.25
.02327	.03385	1.17810	67.50
.02933	.04153	1.11265	63.75
.03701	.05056	1.04720	60.00
.04662	.06097	.98175	56.25
.05848	.07267	.91630	52.50
.07309	.08533	.85085	48.75
.09103	.09819	.78540	45.00
.11279	.11002	.71995	41.25
.13849	.11914	.65450	37.50
.16786	.12342	.58905	33.75
.20002	.11994	.52360	30.00
.23287	.10515	.45815	26.25
.26272	.07592	.39270	22.50
.28480	.03080	.32725	18.75
.29337	-.02979	.26180	15.00
.27970	-.10330	.19635	11.25
.23032	-.18184	.13090	7.50
.13389	-.24696	.06545	3.75
.00000	-.27304	.00000	.00

29337 -.27304

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

DEPTH: FINITE, HEIGHT/DEPTH= .5839

WAVE HEIGHT 1.858611E-03,DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .0000

SOLUTION OF ORDER 18 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

WATER DEPTH	.31350
WAVE HEIGHT	.18305
WAVE PERIOD	9.9242
WAVE SPEED	.63312
MEAN EULERIAN FLUID SPEED	6.37202E-22
MEAN MASS TRANSPORT SPEED	1.29600E-02
MEAN FLUID SPEED RELATIVE TO WAVE	.63312
VOLUME FLUX DUE TO WAVES	4.06295E-03
BERNOULLI CONSTANT	.20267

H = 5m; K = .03661/m, L = 171.6m
H = 1.25m, K = .14694

SOLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
	SA18												
.15703	.33100	.00000	.00000	-.27315	.00000	.1095619	.0000000	.0515524	.0000000	.0000000	.0000000	.0000000	.0000000
.13743	.31410	.00000	.00000	-.26194	.01436	.0986613	.0000000	.0444890	.0000000	.0020412	.0000000	.0009415	.0000000
.11782	.29875	.00000	.00000	-.24953	.02895	.0892528	.0000000	.0384966	.0000000	.0038832	.0000000	.0017550	.0000000
.09822	.28479	.00000	.00000	-.23639	.04379	.0811081	.0000000	.0333934	.0000000	.0055532	.0000000	.0024597	.0000000
.07861	.27210	.00000	.00000	-.22287	.05889	.0740385	.0000000	.0290312	.0000000	.0070741	.0000000	.0030716	.0000000
.05901	.26055	.00000	.00000	-.20922	.07426	.0678874	.0000000	.0252984	.0000000	.0084654	.0000000	.0036041	.0000000
.03940	.25005	.00000	.00000	-.19562	.08990	.0625245	.0000000	.0220648	.0000000	.0097438	.0000000	.0040683	.0000000
.01980	.24050	.00000	.00000	-.18220	.10580	.0578406	.0000000	.0192779	.0000000	.0109237	.0000000	.0044736	.0000000
.00019	.23183	.00000	.00000	-.16904	.12196	.0537442	.0000000	.0168589	.0000000	.0120175	.0000000	.0048278	.0000000
-.01942	.22396	.00000	.00000	-.15621	.13838	.0501586	.0000000	.0147508	.0000000	.0130360	.0000000	.0051377	.0000000
-.03902	.21684	.00000	.00000	-.14373	.15505	.0470189	.0000000	.0129056	.0000000	.0139886	.0000000	.0054088	.0000000
-.05863	.21041	.00000	.00000	-.13163	.17195	.0442704	.0000000	.0112833	.0000000	.0148835	.0000000	.0056459	.0000000
-.07823	.20461	.00000	.00000	-.11989	.18910	.0419668	.0000000	.0098496	.0000000	.0157279	.0000000	.0058530	.0000000
-.09784	.19942	.00000	.00000	-.10851	.20646	.0397689	.0000000	.0085766	.0000000	.0165282	.0000000	.0060337	.0000000
-.11744	.19479	.00000	.00000	-.09748	.22405	.0379437	.0000000	.0074391	.0000000	.0172930	.0000000	.0061907	.0000000
-.13705	.19069	.00000	.00000	-.08677	.24185	.0363631	.0000000	.0064162	.0000000	.0180184	.0000000	.0063265	.0000000
-.15665	.18709	.00000	.00000	-.07636	.25986	.0350035	.0000000	.0054901	.0000000	.0187180	.0000000	.0064432	.0000000
-.17626	.18397	.00000	.00000	-.06622	.27806	.0338451	.0000000	.0046449	.0000000	.0193929	.0000000	.0065426	.0000000
-.19587	.18130	.00000	.00000	-.05631	.29647	.0328715	.0000000	.0038668	.0000000	.0200469	.0000000	.0066260	.0000000
-.21547	.17908	.00000	.00000	-.04661	.31507	.0320690	.0000000	.0031436	.0000000	.0206835	.0000000	.0066947	.0000000
-.23508	.17728	.00000	.00000	-.03708	.33385	.0314266	.0000000	.0024645	.0000000	.0213059	.0000000	.0067497	.0000000
-.25468	.17589	.00000	.00000	-.02769	.35282	.0309356	.0000000	.0018195	.0000000	.0219172	.0000000	.0067917	.0000000
-.27429	.17490	.00000	.00000	-.01840	.37198	.0305894	.0000000	.0011994	.0000000	.0225203	.0000000	.0068213	.0000000
-.29389	.17431	.00000	.00000	-.00918	.39131	.0303835	.0000000	.0005957	.0000000	.0231180	.0000000	.0068389	.0000000

OLUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.09490	.18996	.13392	.29338	-.02991	.00061	.0360860	.2933784	.0147376	.1198165	.0000000	.0000000	.0000000	.0000000
.07789	.18589	.12426	.27429	-.03646	.01706	.0345540	.2742919	.0135240	.1073540	.0006010	.0048300	.0002405	.0019329
.06087	.18200	.11524	.25674	-.04134	.03341	.0331254	.2567378	.0124011	.0961147	.0011769	.0093492	.0004610	.0036640
.04385	.17831	.10681	.24061	-.04480	.04969	.0317961	.2406124	.0113624	.0859834	.0017293	.0135798	.0006632	.0052134
.02684	.17482	.09891	.22582	-.04708	.06592	.0305616	.2258171	.0104012	.0768536	.0022598	.0175484	.0008484	.0065999
.00982	.17152	.09149	.21226	-.04835	.08213	.0294176	.2122596	.0095113	.0686275	.0027701	.0212757	.0010178	.0078367
-.00720	.16840	.08451	.19985	-.04878	.09832	.0283598	.1998535	.0086867	.0612155	.0032617	.0247821	.0011727	.0089415
-.02421	.16548	.07794	.18852	-.04850	.11450	.0273838	.1885189	.0079217	.0545357	.0037360	.0280866	.0013140	.0099263
-.04123	.16274	.07173	.17818	-.04763	.13070	.0264855	.1781821	.0072112	.0485134	.0041944	.0312066	.0014427	.0108031
-.05825	.16019	.06584	.16878	-.04625	.14692	.0256610	.1687752	.0065500	.0430801	.0046380	.0341586	.0015598	.0115824
-.07526	.15782	.06026	.16024	-.04446	.16316	.0249068	.1602363	.0059337	.0381739	.0050683	.0369580	.0016660	.0122737
-.09228	.15563	.05494	.15251	-.04232	.17944	.0242192	.1525090	.0053577	.0337377	.0054863	.0396190	.0017621	.0128856
-.10930	.15361	.04986	.14554	-.03988	.19576	.0235951	.1455422	.0048181	.0297199	.0058931	.0421549	.0018487	.0134255
-.12631	.15176	.04500	.13929	-.03720	.21212	.0230315	.1392897	.0043111	.0260729	.0062898	.0445783	.0019264	.0139002
-.14333	.15009	.04033	.13371	-.03432	.22853	.0225258	.1337104	.0038332	.0227532	.0066774	.0469011	.0019957	.0143157
-.16035	.14858	.03584	.12877	-.03127	.24499	.0220754	.1287673	.0033809	.0197208	.0070569	.0491344	.0020570	.0146770
-.17736	.14724	.03149	.12443	-.02808	.26150	.0216782	.1244277	.0029512	.0169389	.0074292	.0512887	.0021109	.0149890
-.19438	.14606	.02728	.12066	-.02478	.27807	.0213323	.1206633	.0025410	.0143731	.0077951	.0533740	.0021576	.0152554
-.21140	.14504	.02318	.11745	-.02139	.29469	.0210359	.1174491	.0021478	.0119916	.0081556	.0554000	.0021975	.0154797
-.22841	.14418	.01917	.11476	-.01793	.31137	.0207875	.1147642	.0017687	.0097646	.0085115	.0573757	.0022309	.0156648
-.24543	.14348	.01525	.11259	-.01441	.32811	.0205860	.1125909	.0014012	.0076637	.0088635	.0593102	.0022578	.0158131
-.26245	.14293	.01138	.11092	-.01084	.34491	.0204303	.1109151	.0010430	.0056623	.0092125	.0612118	.0022786	.0159265
-.27946	.14255	.00756	.10973	-.00724	.36178	.0203196	.1097259	.0006915	.0037344	.0095592	.0630991	.0022934	.0160064
-.29648	.14231	.00377	.10902	-.00363	.37870	.0202535	.1090154	.0003446	.0018551	.0099044	.0649503	.0023022	.0160540
-.31350	.14224	.00000	.10878	.00000	.39569	.0202314	.1087791	.0000000	.0000000	.0102489	.0668033	.0023051	.0160698

OLUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.03183	.05767	.10268	.19992	.11979	.00000	.0033263	.1999193	.0011487	.0690381	.0000000	.0000000	.0000000	.0000000
.01744	.05962	.09739	.19598	.10916	.01603	.0035542	.1959766	.0011762	.0648567	.0000495	.0028482	.0000167	.0009633
.00305	.06138	.09222	.19207	.09941	.03192	.0037675	.1920730	.0011926	.0608011	.0001022	.0056400	.0000338	.0018673
-.01133	.06298	.08718	.18824	.09046	.04768	.0039664	.1882365	.0011985	.0568782	.0001578	.0083761	.0000510	.0027139
-.02572	.06443	.08225	.18449	.08224	.06331	.0041508	.1844906	.0011945	.0530917	.0002162	.0110576	.0000682	.0035051
-.04011	.06574	.07744	.18086	.07469	.07882	.0043213	.1808555	.0011814	.0494434	.0002772	.0136860	.0000853	.0042428
-.05450	.06692	.07274	.17735	.06774	.09424	.0044783	.1773483	.0011599	.0459327	.0003405	.0162631	.0001021	.0049290
-.06889	.06799	.06814	.17398	.06135	.10955	.0046224	.1739832	.0011307	.0425578	.0004059	.0187907	.0001186	.0055656
-.08328	.06895	.06363	.17077	.05546	.12478	.0047541	.1707722	.0010945	.0393151	.0004734	.0212710	.0001346	.0061546
-.09767	.06981	.05922	.16773	.05003	.13993	.0048740	.1677254	.0010520	.0362004	.0005427	.0237063	.0001501	.0066979
-.11206	.07059	.05489	.16485	.04501	.15500	.0049829	.1648512	.0010038	.0332080	.0006136	.0260990	.0001648	.0071972
-.12644	.07128	.05064	.16216	.04037	.17000	.0050812	.1621562	.0009505	.0303319	.0006860	.0284516	.0001789	.0076544
-.14083	.07190	.04646	.15965	.03607	.18494	.0051697	.1596463	.0008926	.0275653	.0007597	.0307667	.0001922	.0080709
-.15522	.07245	.04236	.15733	.03207	.19982	.0052488	.1573259	.0008308	.0249009	.0008347	.0330472	.0002046	.0084484
-.16961	.07293	.03831	.15520	.02835	.21464	.0053191	.1551988	.0007654	.0223311	.0009107	.0352956	.0002160	.0087882
-.18400	.07336	.03432	.15327	.02486	.22942	.0053812	.1532680	.0006969	.0198480	.0009877	.0375148	.0002266	.0090916
-.19839	.07373	.03038	.15154	.02158	.24414	.0054355	.1515359	.0006257	.0174433	.0010655	.0397077	.0002361	.0093599
-.21278	.07404	.02648	.15000	.01850	.25882	.0054823	.1500042	.0005522	.0151086	.0011441	.0418771	.0002446	.0095941
-.22717	.07431	.02263	.14867	.01557	.27345	.0055222	.1486744	.0004767	.0128354	.0012232	.0440259	.0002520	.0097951
-.24155	.07453	.01881	.14755	.01277	.28804	.0055554	.1475475	.0003997	.0106151	.0013029	.0461570	.0002583	.0099639
-.25594	.07471	.01501	.14662	.01009	.30259	.0055821	.1466250	.0003213	.0084390	.0013831	.0482734	.0002634	.0101009
-.27033	.07485	.01124	.14591	.00749	.31711	.0056027	.1459067	.0002418	.0062982	.0014635	.0503780	.0002675	.0102070
-.28472	.07495	.00748	.14539	.00496	.33159	.0056173	.1453933	.0001617	.0041841	.0015443	.0524737	.0002704	.0102824
-.29911	.07501	.00374	.14509	.00247	.34603	.0056260	.1450852	.0000810	.0020876	.0016251	.0545635	.0002721	.0103275

WATER SURFACE ELEVATION

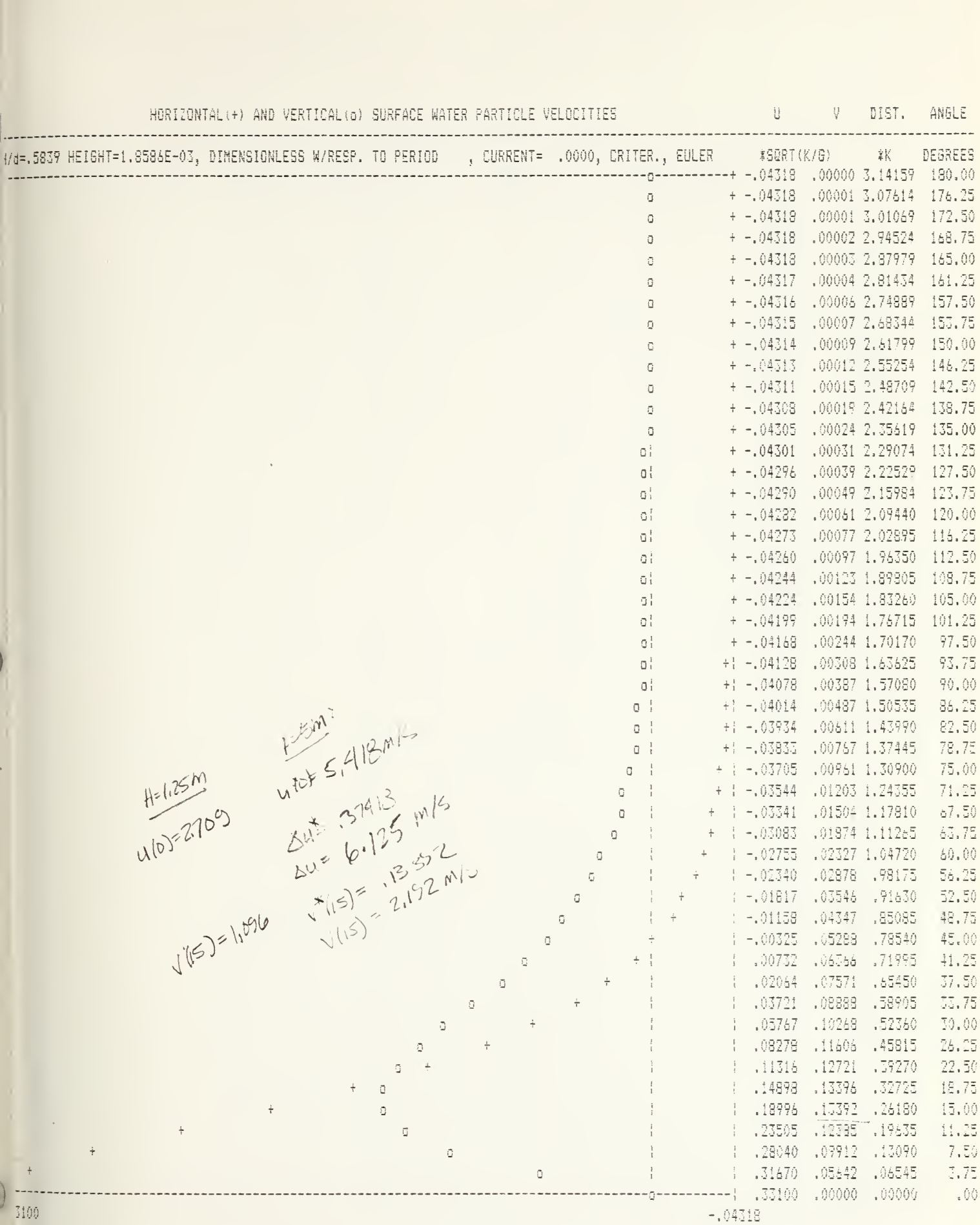
/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

ELEV.VS. %K	TIME (K*G)^.5	DIST. %K	ANGLE DEGREES
-.02602	4.96210	3.14159	180.00
-.02603	4.85873	3.07614	176.25
-.02603	4.75535	3.01069	172.50
-.02601	4.65197	2.94524	168.75
-.02599	4.54860	2.87979	165.00
-.02600	4.44522	2.81434	161.25
-.02603	4.34184	2.74889	157.50
-.02603	4.23846	2.68344	153.75
-.02599	4.13509	2.61799	150.00
-.02594	4.03171	2.55254	146.25
-.02593	3.92833	2.48709	142.50
-.02598	3.82496	2.42164	138.75
-.02600	3.72158	2.35619	135.00
-.02593	3.61820	2.29074	131.25
-.02582	3.51482	2.22529	127.50
-.02575	3.41145	2.15984	123.75
-.02578	3.30807	2.09440	120.00
-.02580	3.20469	2.02895	116.25
-.02570	3.10132	1.96350	112.50
-.02548	2.99794	1.89805	108.75
-.02527	2.89456	1.83260	105.00
-.02517	2.79118	1.76715	101.25
-.02510	2.68781	1.70170	97.50
-.02488	2.58443	1.63625	93.75
-.02440	2.48105	1.57080	90.00
-.02383	2.37768	1.50535	86.25
-.02332	2.27430	1.43990	82.50
-.02285	2.17092	1.37445	78.75
-.02214	2.06754	1.30900	75.00
-.02097	1.96417	1.24355	71.25
-.01940	1.86079	1.17810	67.50
-.01768	1.75741	1.11265	63.75
-.01584	1.65403	1.04720	60.00
-.01352	1.55066	.98175	56.25
-.01027	1.44728	.91630	52.50
-.00596	1.34390	.85085	48.75
-.00083	1.24052	.78540	45.00
.00499	1.13715	.71995	41.25
.01192	1.03377	.65450	37.50
.02071	.93039	.58905	33.75
.03183	.82702	.52360	30.00
.04503	.72364	.45815	26.25
.05983	.62026	.39270	22.50
.07627	.51689	.32725	18.75
.09490	.41351	.26180	15.00
.11556	.31013	.19635	11.25
.13586	.20675	.13090	7.50
.15124	.10338	.06545	3.75
.15703	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

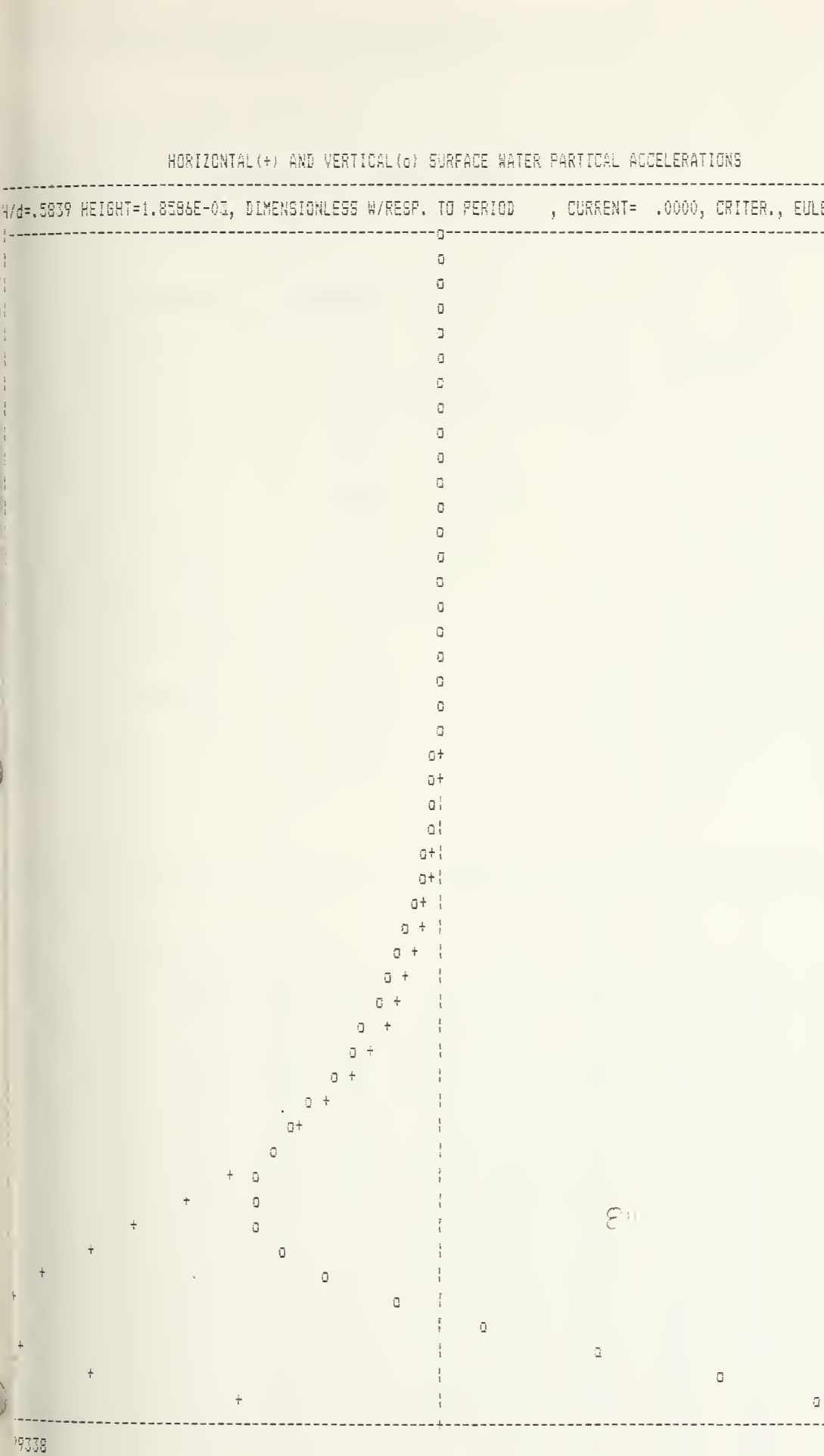
H/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.04318	.00000	3.14159	180.00
-.04318	.00001	3.07614	176.25
-.04318	.00001	3.01069	172.50
-.04318	.00002	2.94524	168.75
-.04318	.00003	2.87979	165.00
-.04317	.00004	2.81434	161.25
-.04316	.00006	2.74889	157.50
-.04315	.00007	2.68344	153.75
-.04314	.00009	2.61799	150.00
-.04313	.00012	2.55254	146.25
-.04311	.00015	2.48709	142.50
-.04308	.00019	2.42164	138.75
-.04305	.00024	2.35619	135.00
-.04301	.00031	2.29074	131.25
-.04296	.00039	2.22529	127.50
-.04290	.00049	2.15984	123.75
-.04282	.00061	2.09440	120.00
-.04273	.00077	2.02895	116.25
-.04260	.00097	1.96350	112.50
-.04244	.00123	1.89805	108.75
-.04224	.00154	1.83260	105.00
-.04199	.00194	1.76715	101.25
-.04168	.00244	1.70170	97.50
-.04128	.00308	1.63625	93.75
-.04078	.00387	1.57080	90.00
-.04014	.00487	1.50535	86.25
-.03934	.00611	1.43990	82.50
-.03833	.00767	1.37445	78.75
-.03705	.00961	1.30900	75.00
-.03544	.01203	1.24355	71.25
-.03341	.01504	1.17810	67.50
-.03083	.01874	1.11265	63.75
-.02755	.02327	1.04720	60.00
-.02340	.02878	.98175	56.25
-.01817	.03546	.91630	52.50
-.01158	.04347	.85085	48.75
-.00325	.05288	.78540	45.00
.00732	.06366	.71995	41.25
.02064	.07571	.65450	37.50
.03721	.08888	.58905	33.75
.05767	.10268	.52360	30.00
.08278	.11606	.45815	26.25
.11316	.12721	.39270	22.50
.14898	.13396	.32725	18.75
.18996	.13392	.26180	15.00
.23505	.12385	.19635	11.25
.28040	.09912	.13090	7.50
.31670	.05642	.06545	3.75
.33100	.00000	.00000	.00



HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

H/d=.5839 HEIGHT=1.8586E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



	Ax	Ay	DIST.	ANGLE
	*1/G	*1/G	*K	DEGREES
	.00000	.00007	3.14159	180.00
	.00001	.00007	3.07614	176.25
	.00002	.00008	3.01069	172.50
	.00004	.00009	2.94524	168.75
	.00005	.00010	2.87979	165.00
	.00006	.00012	2.81434	161.25
	.00008	.00016	2.74889	157.50
	.00011	.00019	2.68344	153.75
	.00014	.00024	2.61799	150.00
	.00018	.00029	2.55254	146.25
	.00022	.00036	2.48709	142.50
	.00028	.00047	2.42164	138.75
	.00036	.00059	2.35619	135.00
	.00046	.00074	2.29074	131.25
	.00058	.00092	2.22529	127.50
	.00072	.00115	2.15984	123.75
	.00089	.00146	2.09440	120.00
	.00114	.00186	2.02895	116.25
	.00145	.00233	1.96350	112.50
	.00183	.00292	1.89805	108.75
	.00229	.00366	1.83260	105.00
	.00297	.00461	1.76715	101.25
	.00363	.00581	1.70170	97.50
	.00461	.00730	1.63625	93.75
	.00582	.00913	1.57080	90.00
	.00732	.01142	1.50535	86.25
	.00920	.01428	1.43990	82.50
	.01161	.01783	1.37445	78.75
	.01468	.02218	1.30900	75.00
	.01853	.02747	1.24355	71.25
	.02332	.03387	1.17810	67.50
	.02934	.04153	1.11265	63.75
	.03696	.05056	1.04720	60.00
	.04657	.06097	.98175	56.25
	.05850	.07265	.91630	52.50
	.07317	.08531	.85085	48.75
	.09110	.09822	.78540	45.00
	.11280	.11011	.71995	41.25
	.13845	.11922	.65450	37.50
	.16778	.12336	.58905	33.75
	.19992	.11979	.52360	30.00
	.23287	.10508	.45815	26.25
	.26296	.07597	.39270	22.50
	.28512	.03079	.32725	18.75
	.29338	-.02991	.26180	15.00
	.27935	-.10331	.19635	11.25
	.23007	-.18165	.13090	7.50
	.13398	-.24688	.06545	3.75
	.00000	-.27315	.00000	.00

.29338

-.27315

4C, AC1
1B F.C.

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

DEPTH: FINITE, HEIGHT/DEPTH= .5839

WAVE HEIGHT 1.858611E-03,DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .14

SOLUTION, NON-DIMENSIONALIZED BY WAVENUMBER

WATER DEPTH	.28366
WAVE HEIGHT	.16563 H= 5 m, k= .033126, L= 189.7 m
WAVE PERIOD	9.4401
WAVE SPEED	.66558
MEAN EULERIAN FLUID SPEED	5.81101E-02
MEAN MASS TRANSPORT SPEED	6.96472E-02
MEAN FLUID SPEED RELATIVE TO WAVE	.60747
VOLUME FLUX DUE TO WAVES	3.27261E-03
BERNOULLI CONSTANT	.18644

SOLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

6.4399 -1 = 5.44 / 100%

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.14405	.37442	.00000	.00000	-.27027	.00000	.1401887	.0000000	.0599602	.0000000	.0000000	.0000000	.0000000	.0000000
.12623	.35864	.00000	.00000	-.25903	.01310	.1286226	.0000000	.0527210	.0000000	.0023953	.0000000	.0010041	.0000000
.10841	.34429	.00000	.00000	-.24667	.02642	.1185359	.0000000	.0464741	.0000000	.0045976	.0000000	.0018880	.0000000
.09059	.33123	.00000	.00000	-.23364	.03996	.1097151	.0000000	.0410605	.0000000	.0066315	.0000000	.0026679	.0000000
.07277	.31935	.00000	.00000	-.22025	.05373	.1019823	.0000000	.0363491	.0000000	.0085178	.0000000	.0033577	.0000000
.05494	.30853	.00000	.00000	-.20675	.06775	.0951887	.0000000	.0322313	.0000000	.0102748	.0000000	.0039688	.0000000
.03712	.29868	.00000	.00000	-.19331	.08201	.0892094	.0000000	.0286168	.0000000	.0119179	.0000000	.0045110	.0000000
.01930	.28972	.00000	.00000	-.18005	.09650	.0839390	.0000000	.0254303	.0000000	.0134607	.0000000	.0049926	.0000000
.00148	.28158	.00000	.00000	-.16706	.11123	.0792888	.0000000	.0226084	.0000000	.0149152	.0000000	.0054206	.0000000
-.01634	.27420	.00000	.00000	-.15439	.12619	.0751833	.0000000	.0200979	.0000000	.0162916	.0000000	.0058012	.0000000
-.03416	.26750	.00000	.00000	-.14207	.14137	.0715588	.0000000	.0178538	.0000000	.0175992	.0000000	.0061394	.0000000
-.05198	.26146	.00000	.00000	-.13012	.15676	.0683609	.0000000	.0158376	.0000000	.0188460	.0000000	.0064396	.0000000
-.06980	.25601	.00000	.00000	-.11853	.17237	.0655436	.0000000	.0140168	.0000000	.0200391	.0000000	.0067056	.0000000
-.08763	.25113	.00000	.00000	-.10729	.18818	.0630675	.0000000	.0123634	.0000000	.0211851	.0000000	.0069407	.0000000
-.10545	.24678	.00000	.00000	-.09639	.20419	.0608990	.0000000	.0108530	.0000000	.0222898	.0000000	.0071475	.0000000
-.12327	.24292	.00000	.00000	-.08581	.22039	.0590099	.0000000	.0094647	.0000000	.0233582	.0000000	.0073286	.0000000
-.14109	.23953	.00000	.00000	-.07552	.23677	.0573760	.0000000	.0081801	.0000000	.0243953	.0000000	.0074858	.0000000
-.15891	.23659	.00000	.00000	-.06549	.25333	.0559771	.0000000	.0069831	.0000000	.0254054	.0000000	.0076209	.0000000
-.17673	.23409	.00000	.00000	-.05570	.27008	.0547960	.0000000	.0058592	.0000000	.0263924	.0000000	.0077354	.0000000
-.19455	.23199	.00000	.00000	-.04611	.28699	.0538188	.0000000	.0047956	.0000000	.0273602	.0000000	.0078303	.0000000
-.21237	.23029	.00000	.00000	-.03668	.30407	.0530341	.0000000	.0037805	.0000000	.0283124	.0000000	.0079067	.0000000
-.23020	.22898	.00000	.00000	-.02739	.32132	.0524328	.0000000	.0028033	.0000000	.0292521	.0000000	.0079654	.0000000
-.24802	.22805	.00000	.00000	-.01821	.33874	.0520081	.0000000	.0018537	.0000000	.0301828	.0000000	.0080069	.0000000
-.26584	.22750	.00000	.00000	-.00909	.35632	.0517551	.0000000	.0009223	.0000000	.0311074	.0000000	.0080316	.0000000
-.28366	.22731	.00000	.00000	.00000	.37406	.0516711	.0000000	.0000000	.0000000	.0320290	.0000000	.0080398	.0000000

LUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.08129	.22684	.12750	.28906	-.00626	.00077	.0514550	.2890639	.0187785	.1054938	.0000000	.0000000	.0000000	.0000000
.06608	.22400	.11862	.27151	-.01386	.01582	.0501760	.2715114	.0175487	.0949594	.0007727	.0042621	.0002762	.0015241
.05088	.22126	.11028	.25530	-.01986	.03077	.0489578	.2553041	.0163782	.0854087	.0015264	.0082676	.0005342	.0028954
.03567	.21864	.10246	.24036	-.02449	.04564	.0478016	.2403574	.0152645	.0767536	.0022621	.0120361	.0007747	.0041284
.02047	.21612	.09509	.22659	-.02795	.06044	.0467080	.2265910	.0142051	.0689119	.0029807	.0155864	.0009988	.0052359
.00526	.21372	.08815	.21393	-.03042	.07521	.0456770	.2139289	.0131969	.0618080	.0036831	.0189357	.0012071	.0062298
-.00995	.21144	.08160	.20230	-.03203	.08994	.0447081	.2023003	.0122372	.0553721	.0043703	.0221004	.0014005	.0071207
-.02515	.20929	.07539	.19164	-.03292	.10465	.0438008	.1916390	.0113228	.0495399	.0050432	.0250955	.0015796	.0079184
-.04036	.20725	.06951	.18188	-.03319	.11935	.0429540	.1818837	.0104507	.0442523	.0057029	.0279355	.0017452	.0086315
-.05557	.20535	.06391	.17298	-.03292	.13405	.0421666	.1729777	.0096179	.0394551	.0063500	.0306335	.0018978	.0092679
-.07077	.20356	.05858	.16487	-.03221	.14876	.0414374	.1648692	.0088215	.0350986	.0069857	.0332022	.0020380	.0098347
-.08598	.20190	.05349	.15751	-.03111	.16349	.0407653	.1575105	.0080585	.0311368	.0076107	.0356533	.0021663	.0103383
-.10118	.20037	.04861	.15086	-.02969	.17823	.0401489	.1508584	.0073262	.0275279	.0082259	.0379979	.0022833	.0107844
-.11639	.19896	.04392	.14487	-.02799	.19300	.0395870	.1448736	.0066217	.0242328	.0088321	.0402464	.0023893	.0111779
-.13160	.19768	.03941	.13952	-.02605	.20779	.0390784	.1395210	.0059424	.0212159	.0094302	.0424086	.0024849	.0115235
-.14680	.19652	.03505	.13477	-.02392	.22262	.0386220	.1347688	.0052857	.0184439	.0100210	.0444941	.0025702	.0118250
-.16201	.19549	.03083	.13059	-.02162	.23748	.0382166	.1305890	.0046490	.0158861	.0106052	.0465117	.0026458	.0120860
-.17722	.19458	.02673	.12696	-.01919	.25238	.0378613	.1269571	.0040301	.0135138	.0111836	.0484698	.0027117	.0123096
-.19242	.19379	.02273	.12385	-.01664	.26731	.0375552	.1238514	.0034264	.0112999	.0117570	.0503767	.0027684	.0124982
-.20763	.19313	.01881	.12125	-.01400	.28228	.0372976	.1212539	.0028358	.0092191	.0123262	.0522403	.0028161	.0126542
-.22283	.19258	.01496	.11915	-.01128	.29730	.0370877	.1191491	.0022559	.0072472	.0128917	.0540681	.0028548	.0127794
-.23804	.19216	.01117	.11752	-.00851	.31235	.0369250	.1175248	.0016845	.0053613	.0134544	.0558676	.0028847	.0128753
-.25325	.19186	.00743	.11637	-.00570	.32745	.0368091	.1163713	.0011195	.0035391	.0140150	.0576459	.0029060	.0129430
-.26845	.19168	.00371	.11568	-.00285	.34259	.0367397	.1156819	.0005587	.0017591	.0145742	.0594102	.0029188	.0129832
-.28366	.19162	.00000	.11545	.00000	.35778	.0367166	.1154525	.0000000	.0000000	.0151327	.0611676	.0029230	.0129966

1.5%

±6%

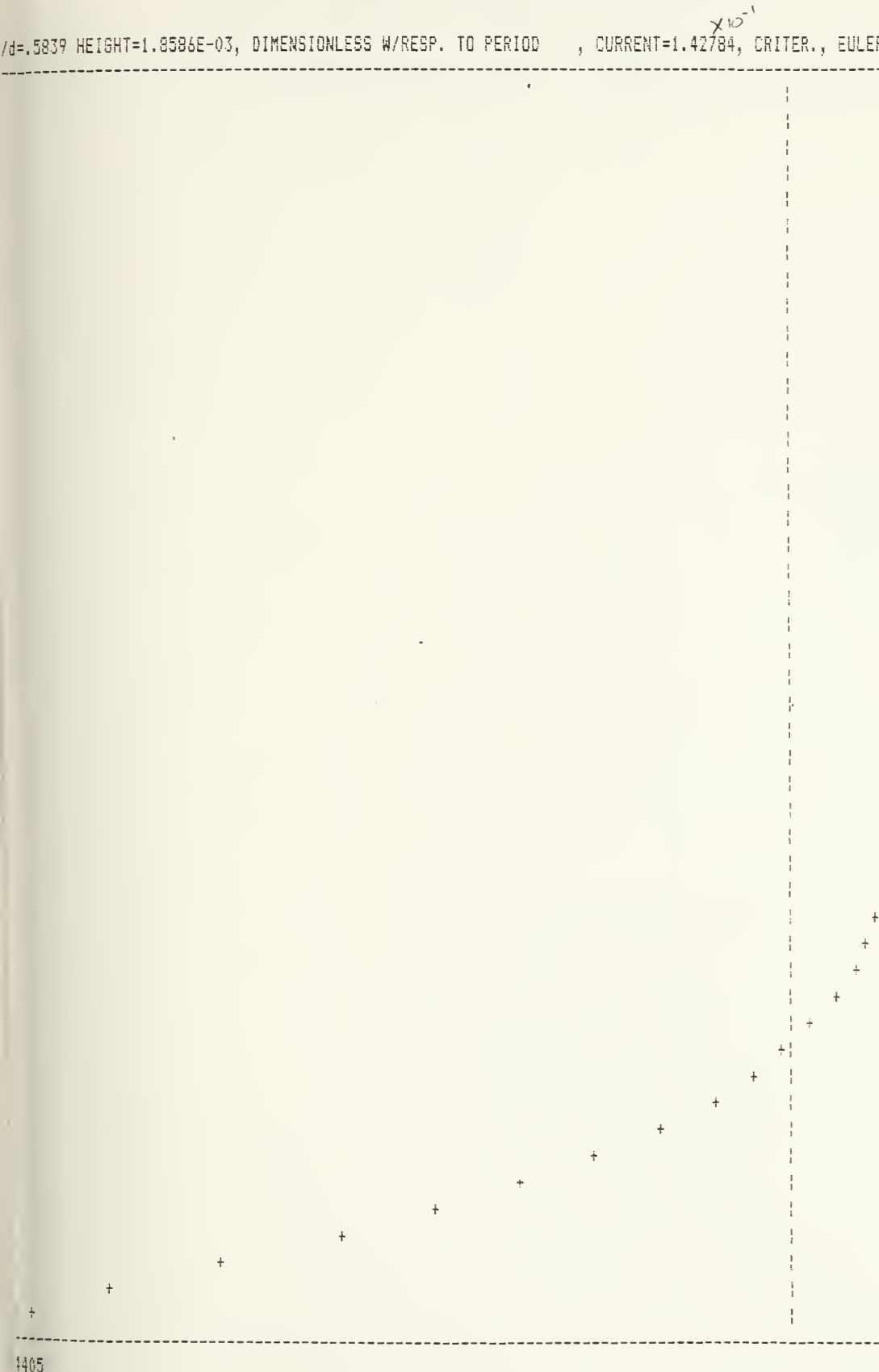
$\times \frac{K_0}{K_1}$ ±1.2%

LUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.02350	.10149	.08760	.17440	.12212	.00000	.0103008	.1744035	.0031640	.0535703	.0000000	.0000000	.0000000	.0000000
.01070	.10351	.08335	.17246	.11251	.01430	.0107149	.1724627	.0031541	.0507668	.0001345	.0022197	.0000404	.0006677
-.00209	.10537	.07917	.17044	.10358	.02848	.0111030	.1704380	.0031262	.0479895	.0002741	.0044140	.0000806	.0012996
-.01489	.10708	.07506	.16836	.09526	.04255	.0114656	.1683610	.0030816	.0452500	.0004185	.0065820	.0001203	.0018963
-.02769	.10864	.07102	.16626	.08752	.05652	.0118035	.1662593	.0030213	.0425572	.0005674	.0087233	.0001594	.0024382
-.04049	.11008	.06704	.16416	.08030	.07039	.0121175	.1641569	.0029466	.0399181	.0007205	.0108377	.0001976	.0029860
-.05329	.11139	.06312	.16207	.07357	.08417	.0124086	.1620749	.0028586	.0373375	.0008775	.0129254	.0002347	.0034804
-.06609	.11260	.05927	.16003	.06729	.09787	.0126777	.1600317	.0027583	.0348187	.0010380	.0149866	.0002707	.0039421
-.07888	.11369	.05547	.15804	.06142	.11149	.0129256	.1580433	.0026469	.0323634	.0012018	.0170220	.0003053	.0043720
-.09168	.11469	.05172	.15612	.05592	.12504	.0131534	.1561238	.0025251	.0299721	.0013687	.0190325	.0003384	.0047709
-.10448	.11559	.04803	.15429	.05077	.13852	.0133619	.1542852	.0023942	.0276446	.0015384	.0210188	.0003698	.0051396
-.11728	.11641	.04439	.15254	.04593	.15194	.0135519	.1525380	.0022548	.0253792	.0017106	.0229823	.0003996	.0054789
-.13008	.11715	.04080	.15089	.04137	.16530	.0137244	.1508913	.0021078	.0231741	.0018852	.0249240	.0004275	.0057896
-.14288	.11781	.03724	.14935	.03707	.17860	.0138800	.1493529	.0019541	.0210263	.0020618	.0268453	.0004535	.0060725
-.15568	.11840	.03373	.14793	.03300	.19184	.0140196	.1479296	.0017943	.0189327	.0022403	.0287477	.0004775	.0063282
-.16847	.11893	.03025	.14663	.02914	.20504	.0141438	.1466270	.0016292	.0168894	.0024206	.0306326	.0004994	.0065574
-.18127	.11939	.02681	.14545	.02546	.21819	.0142532	.1454501	.0014594	.0148923	.0026023	.0325017	.0005192	.0067608
-.19407	.11979	.02340	.14440	.02193	.23129	.0143484	.1444029	.0012855	.0129369	.0027853	.0343565	.0005367	.0069389
-.20687	.12012	.02001	.14349	.01855	.24435	.0144300	.1434891	.0011081	.0110186	.0029695	.0361988	.0005520	.0070922
-.21967	.12041	.01664	.14271	.01529	.25736	.0144982	.1427113	.0009278	.0091324	.0031546	.0380303	.0005651	.0072211
-.23247	.12064	.01329	.14207	.01211	.27033	.0145535	.1420720	.0007450	.0072732	.0033405	.0398527	.0005758	.0073261
-.24526	.12081	.00995	.14157	.00902	.28327	.0145962	.1415729	.0005604	.0054357	.0035270	.0416678	.0005841	.0074074
-.25806	.12094	.00663	.14122	.00598	.29616	.0146266	.1412154	.0003744	.0036147	.0037140	.0434774	.0005901	.0074654
-.27086	.12102	.00331	.14100	.00298	.30902	.0146447	.1410006	.0001874	.0018046	.0039014	.0452834	.0005937	.0075000
-.28366	.12104	.00000	.14093	.00000	.32184	.0146507	.1409289	.0000000	.0000000	.0040888	.0470875	.0005949	.0075116

WATER SURFACE ELEVATION

/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=1.42784 $\times 10^{-1}$, CRITER., EULER

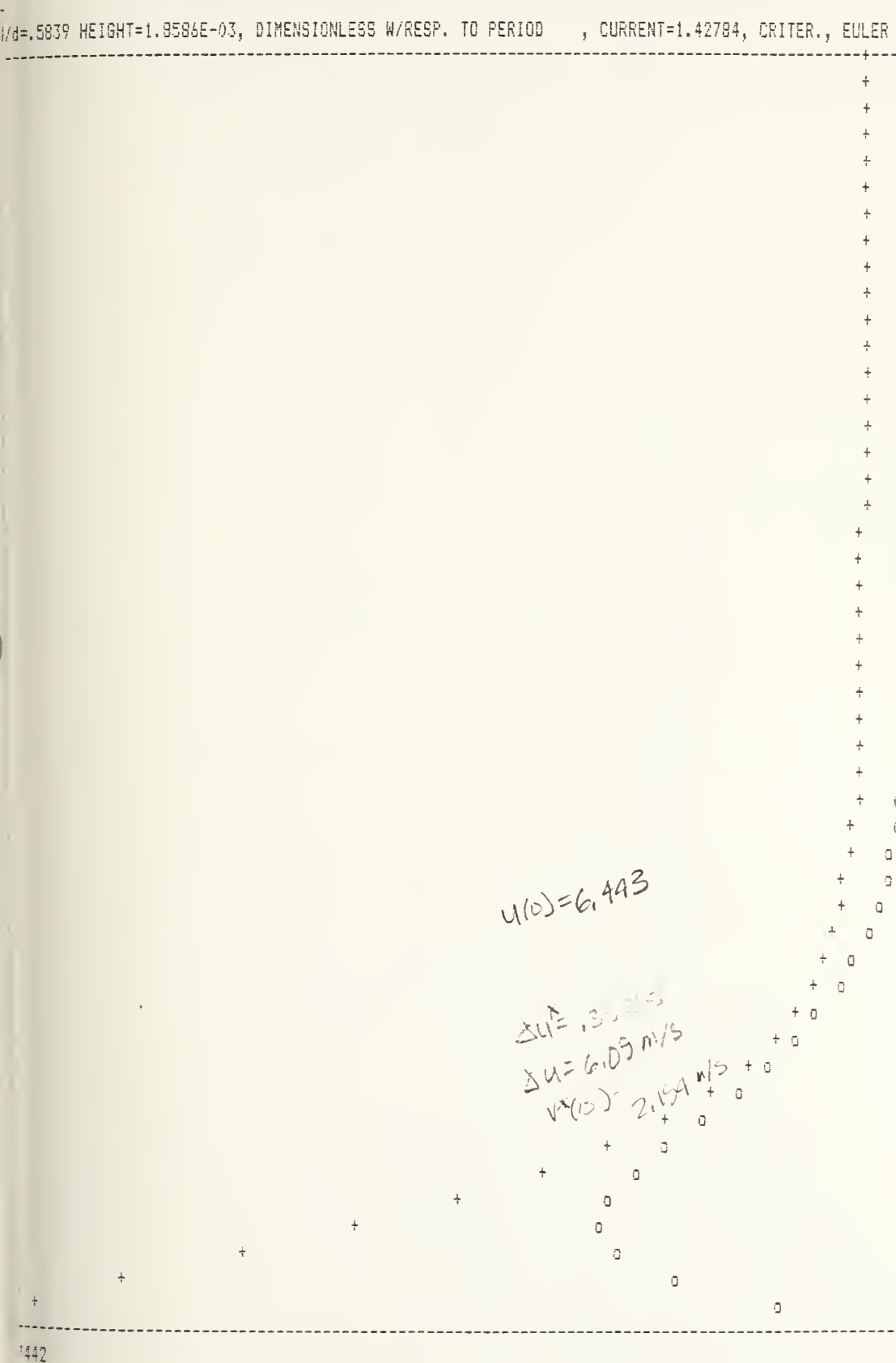


ELEV.VS.	TIME	DIST.	ANGLE
*K	(K*G)^.5	*K	DEGREES
-.02158	4.72006	3.14159	180.00
-.02159	4.62172	3.07614	176.25
-.02159	4.52339	3.01069	172.50
-.02157	4.42505	2.94524	168.75
-.02155	4.32672	2.87979	165.00
-.02156	4.22838	2.81434	161.25
-.02160	4.13005	2.74889	157.50
-.02161	4.03171	2.68344	153.75
-.02157	3.93338	2.61799	150.00
-.02151	3.83505	2.55254	146.25
-.02151	3.73671	2.48709	142.50
-.02158	3.63838	2.42164	138.75
-.02162	3.54004	2.35619	135.00
-.02156	3.44171	2.29074	131.25
-.02145	3.34337	2.22529	127.50
-.02140	3.24504	2.15984	123.75
-.02147	3.14670	2.09440	120.00
-.02154	3.04837	2.02895	116.25
-.02148	2.95003	1.96350	112.50
-.02129	2.85170	1.89805	109.75
-.02112	2.75337	1.83260	105.00
-.02112	2.65503	1.76715	101.25
-.02117	2.55670	1.70170	97.50
-.02107	2.45836	1.63625	93.75
-.02071	2.36003	1.57080	90.00
-.02027	2.26169	1.50535	86.25
-.01998	2.16336	1.43990	82.50
-.01980	2.06502	1.37445	78.75
-.01942	1.96669	1.30900	75.00
-.01859	1.86836	1.24355	71.25
-.01741	1.77002	1.17810	67.50
-.01619	1.67169	1.11265	63.75
-.01501	1.57335	1.04720	60.00
-.01347	1.47502	.98175	56.25
-.01105	1.37668	.91630	52.50
-.00763	1.27835	.85085	48.75
-.00355	1.18001	.78540	45.00
.00099	1.08168	.71995	41.25
.00649	.98334	.65450	37.50
.01380	.88501	.58905	33.75
.02350	.78668	.52360	30.00
.03531	.68834	.45815	26.25
.04866	.59001	.39270	22.50
.06370	.49167	.32725	18.75
.08129	.39334	.26180	15.00
.10155	.29500	.19635	11.25
.12211	.19667	.13090	7.50
.13801	.09833	.06545	3.75
.14405	.00000	.00000	.00

4405 -.02162

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

W/d=.5839 HEIGHT=1.9586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=1.42784, CRITER., EULER



U	V	DIST.	ANGLE
‡SQRT(K/G)		‡K	DEGREES
.02057	.00000	3.14159	180.00
.02057	.00000	3.07614	176.25
.02057	.00001	3.01069	172.50
.02057	.00001	2.94524	168.75
.02058	.00001	2.87979	165.00
.02058	.00002	2.81434	161.25
.02058	.00002	2.74889	157.50
.02058	.00003	2.68344	153.75
.02059	.00004	2.61799	150.00
.02060	.00005	2.55254	146.25
.02061	.00006	2.48709	142.50
.02062	.00008	2.42164	138.75
.02063	.00010	2.35619	135.00
.02065	.00014	2.29074	131.25
.02067	.00017	2.22529	127.50
.02071	.00022	2.15984	123.75
.02074	.00029	2.09440	120.00
.02080	.00037	2.02895	116.25
.02086	.00048	1.96350	112.50
.02095	.00062	1.89805	108.75
.02106	.00079	1.83260	105.00
.02120	.00102	1.76715	101.25
.02139	.00132	1.70170	97.50
.02162	.00170	1.63625	93.75
.02193	.00218	1.57080	90.00
.02232	.00281	1.50535	86.25
.02283	.00361	1.43990	82.50
.02349	.00463	1.37445	78.75
.02434	.00594	1.30900	75.00
.02543	.00763	1.24355	71.25
.02694	.00977	1.17810	67.50
.02866	.01248	1.11265	63.75
.03103	.01588	1.04720	60.00
.03411	.02016	.98175	56.25
.03806	.02551	.91630	52.50
.04314	.03214	.85085	48.75
.04973	.04020	.78540	45.00
.05830	.04978	.71995	41.25
.06939	.06092	.65450	37.50
.08356	.07361	.58905	33.75
.10149	.08760	.52360	30.00
.12413	.10197	.45815	26.25
.15235	.11495	.39270	22.50
.18659	.12430	.32725	18.75
.22684	.12750	.26180	15.00
.27239	.12098	.19635	11.25
.31972	.09921	.13090	7.50
.35876	.05753	.06545	3.75
.37442	.00000	.00000	.00

U(0)=6.443

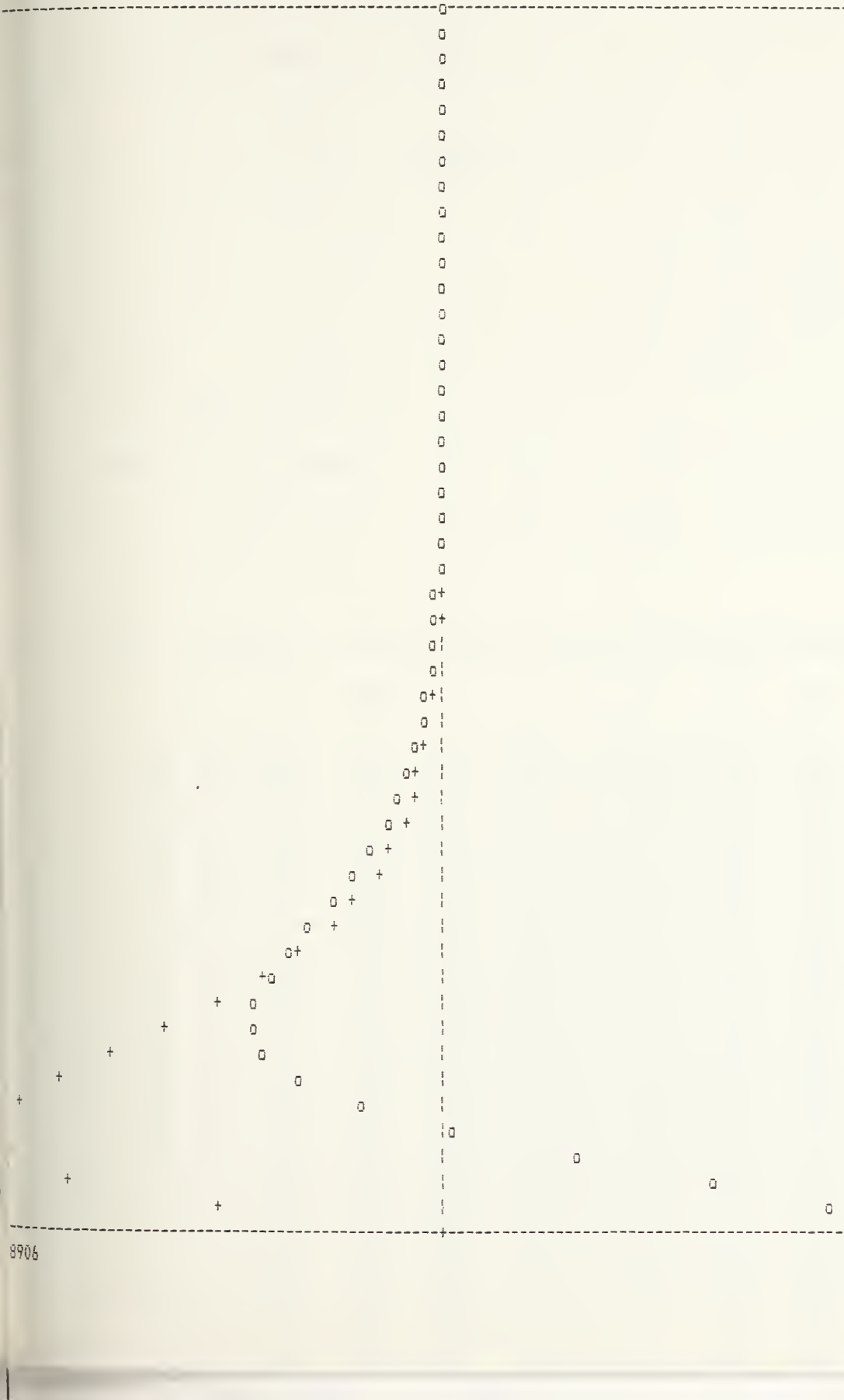
ΔU= 6.05 m/s

V*(0)= 2.154 m/s

.442 .00000

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=1.42784, CRITER., EULER



Ax	Ay	DIST.	ANGLE
*1/G	*1/G	*K	DEGREES
.00000	.00002	3.14159	180.00
.00000	.00003	3.07614	176.25
.00001	.00003	3.01069	172.50
.00002	.00003	2.94524	168.75
.00002	.00004	2.87979	165.00
.00002	.00005	2.81434	161.25
.00003	.00006	2.74889	157.50
.00005	.00008	2.68344	153.75
.00006	.00010	2.61799	150.00
.00008	.00012	2.55254	146.25
.00009	.00015	2.48709	142.50
.00012	.00021	2.42164	138.75
.00016	.00027	2.35619	135.00
.00022	.00034	2.29074	131.25
.00028	.00043	2.22529	127.50
.00034	.00055	2.15984	123.75
.00043	.00072	2.09440	120.00
.00057	.00094	2.02895	116.25
.00076	.00121	1.96350	112.50
.00098	.00153	1.89805	108.75
.00123	.00196	1.83260	105.00
.00157	.00254	1.76715	101.25
.00204	.00329	1.70170	97.50
.00266	.00423	1.63625	93.75
.00344	.00541	1.57080	90.00
.00440	.00691	1.50535	86.25
.00564	.00887	1.43990	82.50
.00727	.01138	1.37445	78.75
.00942	.01454	1.30900	75.00
.01217	.01848	1.24355	71.25
.01565	.02341	1.17810	67.50
.02011	.02955	1.11265	63.75
.02592	.03711	1.04720	60.00
.03346	.04621	.98175	56.25
.04308	.05694	.91630	52.50
.05523	.06928	.85085	48.75
.07052	.08285	.78540	45.00
.08975	.09675	.71995	41.25
.11347	.10947	.65450	37.50
.14183	.11892	.58905	33.75
.17440	.12212	.52360	30.00
.20972	.11496	.45815	26.25
.24437	.09285	.39270	22.50
.27302	.05266	.32725	18.75
.28906	-.00626	.26180	15.00
.28299	-.08200	.19635	11.25
.23916	-.16690	.13090	7.50
.14197	-.24018	.06545	3.75
.00000	-.27027	.00000	.00

DY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

H=5m
C_E=2m/s
OR
H=1.25 m
C_E=1m/s

: FINITE, HEIGHT/DEPTH= .5839

HEIGHT 1.858611E-03,DIMENSIONLESS WITH RESPECT TO PERIOD

ENT CRITERION: EULER , MAGNITUDE= .29

2ΔR

TION, NON-DIMENSIONALIZED BY WAVENUMBER 2 HT STEPS

R DEPTH .25932

HEIGHT .15142 H=1.25 m, K = .121136

PERIOD 9.0261

SPEED .69612

EULERIAN FLUID SPEED .11112

MASS TRANSPORT SPEED .12149

FLUID SPEED RELATIVE TO WAVE .58499

IE FLUX DUE TO WAVES 2.68888E-03

ULLI CONSTANT .17278

)

ON VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .5939, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
13319	.41475	.00000	.00000	-.26789	.00000	.1720144	.0000000	.0675183	.0000000	.0000000	.0000000	.0000000	.0000000
11684	.39989	.00000	.00000	-.25664	.01206	.1599103	.0000000	.0601520	.0000000	.0027143	.0000000	.0010440	.0000000
10048	.38636	.00000	.00000	-.24433	.02432	.1492767	.0000000	.0537106	.0000000	.0052426	.0000000	.0019751	.0000000
08413	.37405	.00000	.00000	-.23138	.03678	.1399116	.0000000	.0480528	.0000000	.0076074	.0000000	.0028073	.0000000
06777	.36283	.00000	.00000	-.21810	.04946	.1316453	.0000000	.0430607	.0000000	.0098281	.0000000	.0035523	.0000000
05142	.35261	.00000	.00000	-.20473	.06236	.1243350	.0000000	.0386360	.0000000	.0119213	.0000000	.0042204	.0000000
03506	.34331	.00000	.00000	-.19142	.07548	.1178600	.0000000	.0346964	.0000000	.0139019	.0000000	.0048201	.0000000
01871	.33484	.00000	.00000	-.17830	.08881	.1121181	.0000000	.0311724	.0000000	.0157825	.0000000	.0053587	.0000000
00235	.32714	.00000	.00000	-.16545	.10235	.1070224	.0000000	.0280053	.0000000	.0175745	.0000000	.0058426	.0000000
01400	.32015	.00000	.00000	-.15291	.11610	.1024988	.0000000	.0251452	.0000000	.0192878	.0000000	.0062773	.0000000
03036	.31382	.00000	.00000	-.14072	.13006	.0984843	.0000000	.0225497	.0000000	.0209313	.0000000	.0066673	.0000000
04671	.30810	.00000	.00000	-.12889	.14421	.0949250	.0000000	.0201822	.0000000	.0225129	.0000000	.0070167	.0000000
06306	.30294	.00000	.00000	-.11742	.15855	.0917748	.0000000	.0180115	.0000000	.0240396	.0000000	.0073291	.0000000
07942	.29832	.00000	.00000	-.10630	.17308	.0889942	.0000000	.0160103	.0000000	.0255179	.0000000	.0076073	.0000000
09577	.29419	.00000	.00000	-.09551	.18778	.0865495	.0000000	.0141550	.0000000	.0269534	.0000000	.0078539	.0000000
11213	.29054	.00000	.00000	-.08503	.20266	.0844120	.0000000	.0124249	.0000000	.0283514	.0000000	.0080713	.0000000
2848	.28733	.00000	.00000	-.07484	.21771	.0825572	.0000000	.0108017	.0000000	.0297167	.0000000	.0082612	.0000000
14484	.28454	.00000	.00000	-.06491	.23292	.0809645	.0000000	.0092691	.0000000	.0310539	.0000000	.0084253	.0000000
6119	.28216	.00000	.00000	-.05520	.24829	.0796164	.0000000	.0078127	.0000000	.0323671	.0000000	.0085650	.0000000
7755	.28018	.00000	.00000	-.04570	.26382	.0784985	.0000000	.0064191	.0000000	.0336600	.0000000	.0086814	.0000000
9390	.27857	.00000	.00000	-.03636	.27951	.0775991	.0000000	.0050765	.0000000	.0349365	.0000000	.0087754	.0000000
21026	.27732	.00000	.00000	-.02715	.29534	.0769090	.0000000	.0037735	.0000000	.0362000	.0000000	.0088478	.0000000
2661	.27644	.00000	.00000	-.01805	.31133	.0764209	.0000000	.0024997	.0000000	.0374538	.0000000	.0088991	.0000000
4297	.27592	.00000	.00000	-.00901	.32746	.0761300	.0000000	.0012451	.0000000	.0387013	.0000000	.0089297	.0000000
5932	.27574	.00000	.00000	.00000	.34374	.0760334	.0000000	.0000000	.0000000	.0399456	.0000000	.0089399	.0000000

N VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
7000	.26139	.12105	.28297	.01489	.00096	.0683262	.2829740	.0225015	.0931904	.0000000	.0000000	.0000000	.0000000
5628	.25953	.11289	.26700	.00641	.01482	.0673574	.2669963	.0212592	.0842648	.0009309	.0037733	.0003002	.0012175
4256	.25771	.10521	.25218	-.00053	.02858	.0664125	.2521825	.0200487	.0761291	.0018487	.0073354	.0005836	.0023180
2884	.25592	.09796	.23847	-.00615	.04226	.0654964	.2384665	.0188734	.0687163	.0027537	.0107017	.0008507	.0033117
1511	.25419	.09111	.22578	-.01062	.05586	.0646132	.2257846	.0177323	.0619637	.0036464	.0138869	.0011018	.0042083
0139	.25252	.08463	.21408	-.01411	.06941	.0637659	.2140766	.0166248	.0558131	.0045272	.0169047	.0013375	.0050164
1233	.25091	.07849	.20329	-.01675	.08292	.0629571	.2032856	.0155500	.0502103	.0053966	.0197682	.0015583	.0057438
2605	.24938	.07265	.19336	-.01866	.09640	.0621886	.1933583	.0145069	.0451050	.0062553	.0224896	.0017645	.0063978
3977	.24792	.06709	.18424	-.01993	.10986	.0614620	.1842450	.0134940	.0404510	.0071036	.0250803	.0019566	.0069847
5349	.24653	.06178	.17590	-.02065	.12330	.0607782	.1758993	.0125099	.0362050	.0079423	.0275512	.0021350	.0075107
6722	.24523	.05671	.16828	-.02090	.13674	.0601381	.1682787	.0115529	.0323274	.0087719	.0299126	.0023001	.0079809
8094	.24401	.05185	.16134	-.02074	.15017	.0595422	.1613438	.0106214	.0287812	.0095930	.0321741	.0024523	.0084001
9466	.24288	.04718	.15506	-.02023	.16361	.0589907	.1550587	.0097136	.0255323	.0104063	.0343449	.0025918	.0087728
0838	.24183	.04268	.14939	-.01942	.17706	.0584839	.1493907	.0088276	.0225491	.0112122	.0364337	.0027190	.0091027
2210	.24088	.03834	.14431	-.01835	.19053	.0580218	.1443102	.0079617	.0198021	.0120116	.0384488	.0028342	.0093932
3583	.24001	.03413	.13979	-.01706	.20400	.0576043	.1397906	.0071139	.0172637	.0128049	.0403980	.0029376	.0096475
4955	.23923	.03004	.13581	-.01558	.21750	.0572314	.1358083	.0062826	.0149083	.0135928	.0422889	.0030295	.0098683
6327	.23854	.02606	.13234	-.01395	.23102	.0569028	.1323423	.0054657	.0127119	.0143758	.0441286	.0031101	.0100578
7699	.23795	.02218	.12937	-.01218	.24456	.0566186	.1293743	.0046615	.0106515	.0151547	.0459242	.0031796	.0102181
9071	.23744	.01836	.12689	-.01030	.25813	.0563784	.1268890	.0038681	.0087058	.0159300	.0476824	.0032381	.0103509
0444	.23703	.01462	.12487	-.00834	.27172	.0561821	.1248730	.0030837	.0068540	.0167022	.0494098	.0032858	.0104576
1816	.23671	.01092	.12332	-.00631	.28535	.0560296	.1233160	.0023065	.0050764	.0174721	.0511126	.0033228	.0105395
3188	.23648	.00726	.12221	-.00424	.29900	.0559208	.1222096	.0015347	.0033539	.0182402	.0527971	.0033492	.0105973
4560	.23634	.00362	.12155	-.00213	.31267	.0558555	.1215481	.0007664	.0016679	.0190071	.0544695	.0033650	.0106318
5932	.23629	.00000	.12133	.00000	.32638	.0558337	.1213280	.0000000	.0000000	.0197734	.0561359	.0033702	.0106432

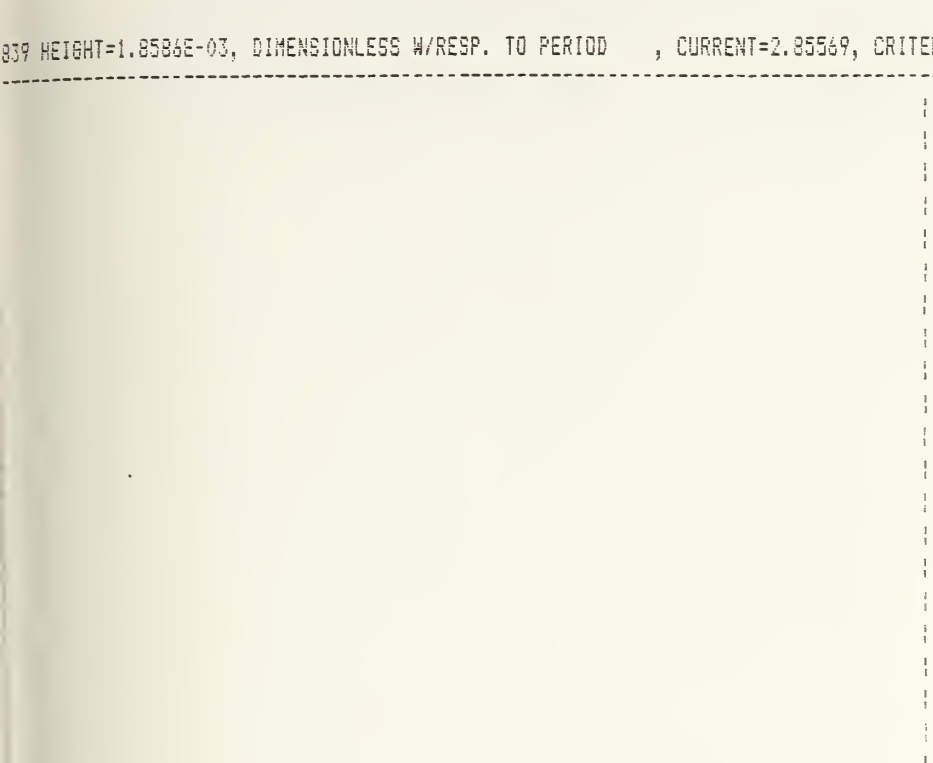
+11.59% +1.6% -3.3%

N VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.721	.14333	.07451	.15108	.11991	.00000	.0205430	.1510823	.0056809	.0417799	.0000000	.0000000	.0000000	.0000000
9569	.14529	.07110	.15063	.11142	.01285	.0211100	.1506345	.0055945	.0399204	.0002400	.0017382	.0000650	.0004707
9583	.14712	.06772	.15003	.10342	.02561	.0216431	.1500297	.0054864	.0380314	.0004863	.0034704	.0001288	.0009198
1735	.14881	.06437	.14930	.09588	.03828	.0221433	.1492987	.0053580	.0361258	.0007385	.0051949	.0001913	.0013470
2887	.15037	.06105	.14847	.08878	.05087	.0226116	.1484688	.0052108	.0342143	.0009964	.0069104	.0002522	.0017523
4040	.15182	.05776	.14756	.08208	.06338	.0230488	.1475646	.0050460	.0323056	.0012594	.0086159	.0003113	.0021355
5192	.15315	.05450	.14661	.07575	.07581	.0234562	.1466078	.0048649	.0304069	.0015274	.0103107	.0003684	.0024968
6344	.15439	.05128	.14562	.06978	.08817	.0238348	.1456180	.0046688	.0285237	.0017998	.0119943	.0004233	.0028363
7496	.15552	.04809	.14461	.06412	.10046	.0241855	.1446123	.0044588	.0266605	.0020765	.0136664	.0004759	.0031542
8649	.15655	.04492	.14361	.05877	.11269	.0245094	.1436061	.0042361	.0248203	.0023570	.0153268	.0005260	.0034508
9801	.15750	.04179	.14261	.05368	.12486	.0248075	.1426129	.0040018	.0230054	.0026411	.0169758	.0005734	.0037264
0953	.15837	.03868	.14164	.04885	.13697	.0250807	.1416447	.0037569	.0212171	.0029286	.0186135	.0006181	.0039811
2105	.15915	.03560	.14071	.04425	.14903	.0253299	.1407122	.0035023	.0194561	.0032190	.0202402	.0006599	.0042155
3258	.15986	.03254	.13982	.03986	.16104	.0255559	.1398245	.0032391	.0177222	.0035121	.0218564	.0006988	.0044297
4410	.16050	.02951	.13899	.03565	.17300	.0257596	.1389900	.0029681	.0160150	.0038078	.0234627	.0007345	.0046240
5562	.16106	.02649	.13822	.03162	.18491	.0259416	.1382156	.0026902	.0143332	.0041056	.0250597	.0007671	.0047989
714	.16156	.02350	.13751	.02774	.19677	.0261027	.1375076	.0024061	.0126753	.0044055	.0266482	.0007965	.0049545
867	.16200	.02052	.13687	.02398	.20859	.0262434	.1368714	.0021167	.0110396	.0047071	.0282290	.0008226	.0050911
9019	.16237	.01756	.13631	.02035	.22037	.0263642	.1363113	.0018227	.0094238	.0050101	.0298029	.0008453	.0052090
0171	.16268	.01462	.13583	.01681	.23211	.0264657	.1358313	.0015247	.0078255	.0053145	.0313707	.0008645	.0053084
323	.16294	.01168	.13543	.01335	.24380	.0265482	.1354344	.0012236	.0062421	.0056199	.0329335	.0008804	.0053894
476	.16313	.00875	.13512	.00996	.25546	.0266120	.1351232	.0009199	.0046708	.0059262	.0344923	.0008927	.0054523
628	.16327	.00583	.13490	.00661	.26708	.0266574	.1348996	.0006143	.0031087	.0062331	.0360479	.0009016	.0054971
780	.16335	.00291	.13476	.00330	.27866	.0266846	.1347649	.0003075	.0015528	.0065404	.0376015	.0009069	.0055240
932	.16338	.00000	.13472	.00000	.29020	.0266936	.1347199	.0000000	.0000000	.0068479	.0391541	.0009086	.0055329

WATER SURFACE ELEVATION

839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=2.85569, CRITER., EULER

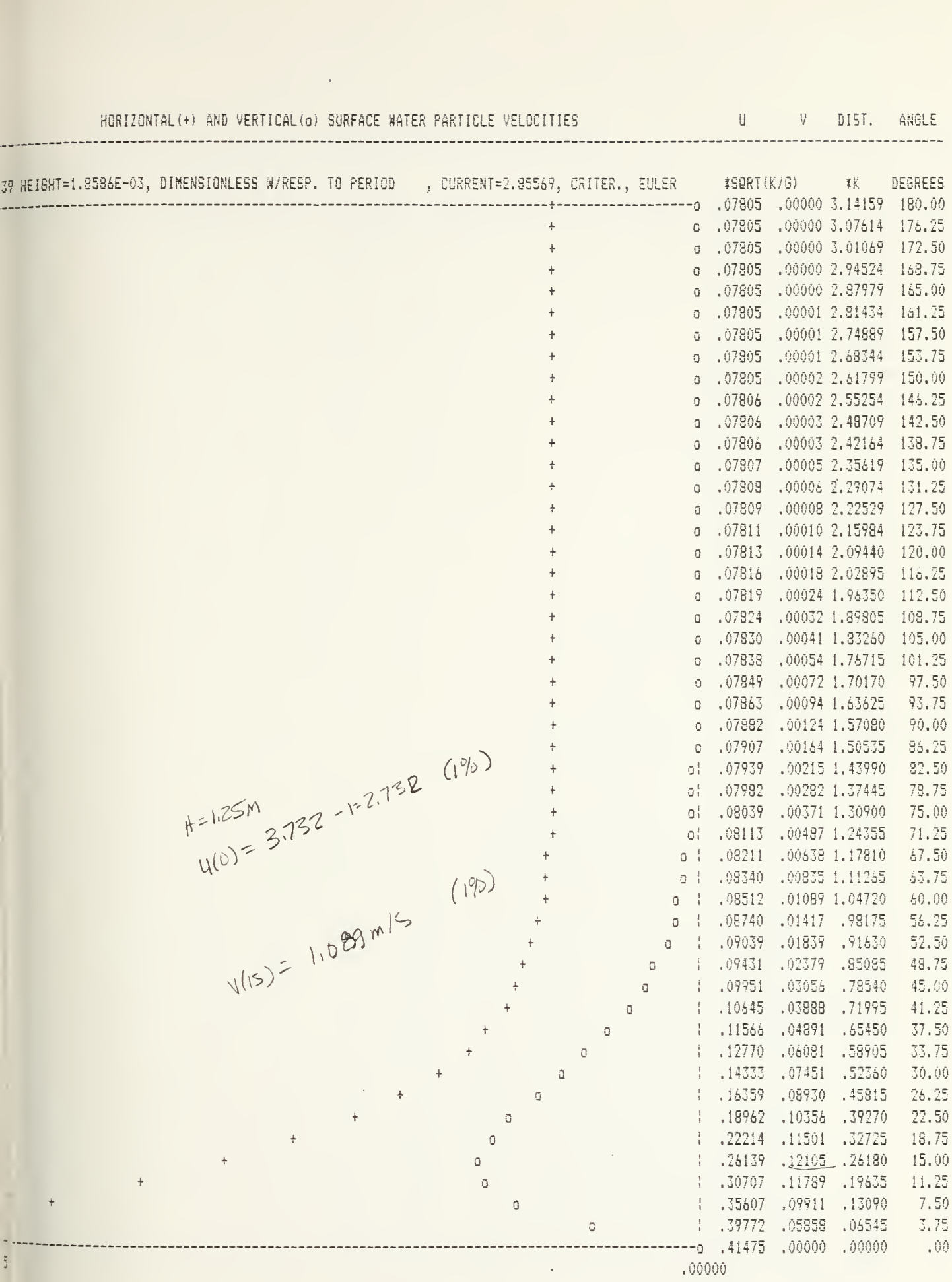


ELEV.VS.	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.01823	4.51303	3.14159	180.00
-.01823	4.41901	3.07614	176.25
-.01824	4.32499	3.01069	172.50
-.01822	4.23097	2.94524	168.75
-.01820	4.13695	2.87979	165.00
-.01821	4.04293	2.81434	161.25
-.01826	3.94890	2.74889	157.50
-.01827	3.85488	2.68344	153.75
-.01822	3.76086	2.61799	150.00
-.01816	3.66684	2.55254	146.25
-.01817	3.57282	2.48709	142.50
-.01825	3.47880	2.42164	138.75
-.01830	3.38478	2.35619	135.00
-.01824	3.29075	2.29074	131.25
-.01812	3.19673	2.22529	127.50
-.01808	3.10271	2.15984	123.75
-.01818	3.00869	2.09440	120.00
-.01829	2.91467	2.02895	116.25
-.01824	2.82065	1.96350	112.50
-.01805	2.72662	1.89805	108.75
-.01790	2.63260	1.83260	105.00
-.01795	2.53858	1.76715	101.25
-.01809	2.44456	1.70170	97.50
-.01806	2.35054	1.63625	93.75
-.01775	2.25652	1.57080	90.00
-.01738	2.16250	1.50535	86.25
-.01722	2.06847	1.43990	82.50
-.01724	1.97445	1.37445	78.75
-.01707	1.88043	1.30900	75.00
-.01645	1.78641	1.24355	71.25
-.01551	1.69239	1.17810	67.50
-.01464	1.59837	1.11265	63.75
-.01394	1.50434	1.04720	60.00
-.01297	1.41032	.98175	56.25
-.01116	1.31630	.91630	52.50
-.00840	1.22228	.85085	48.75
-.00513	1.12826	.78540	45.00
-.00161	1.03424	.71995	41.25
.00267	.94022	.65450	37.50
.00873	.84619	.58905	33.75
.01721	.75217	.52360	30.00
.02778	.65815	.45815	26.25
.03979	.56413	.39270	22.50
.05348	.47011	.32725	18.75
.07000	.37609	.26180	15.00
.08981	.28206	.19635	11.25
.11055	.18804	.13090	7.50
.12692	.09402	.06545	3.75
.13319	.00000	.00000	.00

-.01830

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

39 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=2.85569, CRITER., EULER



U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
.07805	.00000	3.14159	180.00
.07805	.00000	3.07614	176.25
.07805	.00000	3.01069	172.50
.07805	.00000	2.94524	168.75
.07805	.00000	2.87979	165.00
.07805	.00001	2.81434	161.25
.07805	.00001	2.74889	157.50
.07805	.00001	2.68344	153.75
.07805	.00002	2.61799	150.00
.07806	.00002	2.55254	146.25
.07806	.00003	2.48709	142.50
.07806	.00003	2.42164	138.75
.07807	.00005	2.35619	135.00
.07808	.00006	2.29074	131.25
.07809	.00008	2.22529	127.50
.07811	.00010	2.15984	123.75
.07813	.00014	2.09440	120.00
.07816	.00018	2.02895	116.25
.07819	.00024	1.96350	112.50
.07824	.00032	1.89805	108.75
.07830	.00041	1.83260	105.00
.07838	.00054	1.76715	101.25
.07849	.00072	1.70170	97.50
.07863	.00094	1.63625	93.75
.07882	.00124	1.57080	90.00
.07907	.00164	1.50535	86.25
.07939	.00215	1.43990	82.50
.07982	.00282	1.37445	78.75
.08039	.00371	1.30900	75.00
.08113	.00487	1.24355	71.25
.08211	.00638	1.17810	67.50
.08340	.00835	1.11265	63.75
.08512	.01089	1.04720	60.00
.08740	.01417	.98175	56.25
.09039	.01839	.91630	52.50
.09431	.02379	.85085	48.75
.09951	.03056	.78540	45.00
.10645	.03888	.71995	41.25
.11566	.04891	.65450	37.50
.12770	.06081	.58905	33.75
.14333	.07451	.52360	30.00
.16359	.08930	.45815	26.25
.18962	.10356	.39270	22.50
.22214	.11501	.32725	18.75
.26139	.12105	.26180	15.00
.30707	.11789	.19635	11.25
.35607	.09911	.13090	7.50
.39772	.05858	.06545	3.75
.41475	.00000	.00000	.00

.00000

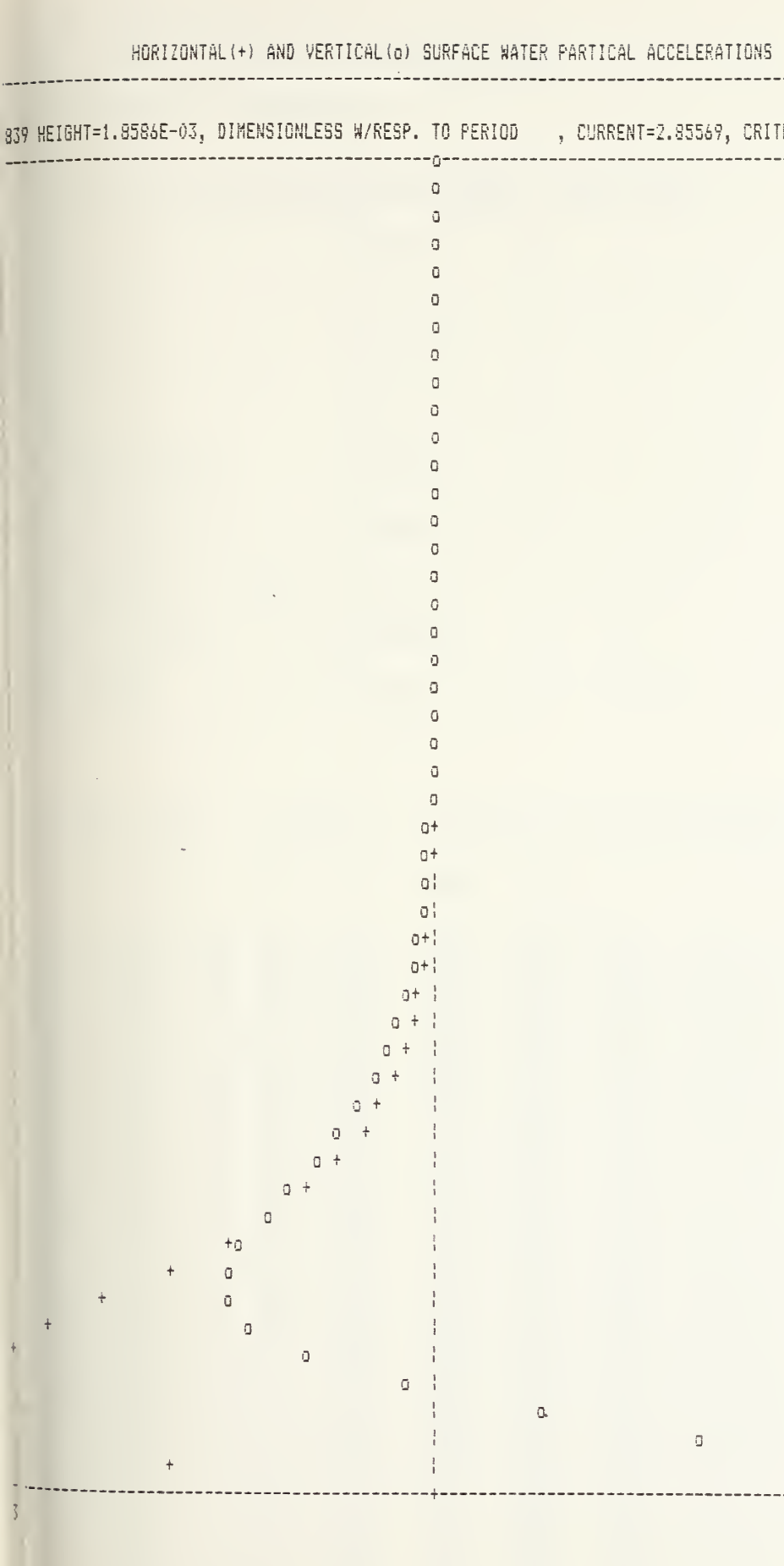
H=1.25M

U(0) = 3.732 - 1 = 2.732 (1%)

V(15) = 1.089 m/s (1%)

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=2.85569, CRITER., EULER



Ax ‡1/G	Ay ‡1/G	DIST. ‡K	ANGLE DEGREES
.00000	.00001	3.14159	180.00
.00000	.00001	3.07614	176.25
.00000	.00001	3.01069	172.50
.00001	.00001	2.94524	168.75
.00001	.00001	2.87979	165.00
.00001	.00002	2.81434	161.25
.00001	.00003	2.74889	157.50
.00002	.00003	2.68344	153.75
.00003	.00004	2.61799	150.00
.00003	.00005	2.55254	146.25
.00004	.00006	2.48709	142.50
.00005	.00009	2.42164	138.75
.00007	.00013	2.35619	135.00
.00011	.00016	2.29074	131.25
.00014	.00020	2.22529	127.50
.00017	.00026	2.15984	123.75
.00021	.00036	2.09440	120.00
.00029	.00048	2.02895	116.25
.00040	.00063	1.96350	112.50
.00052	.00081	1.89805	108.75
.00067	.00106	1.83260	105.00
.00087	.00141	1.76715	101.25
.00115	.00187	1.70170	97.50
.00154	.00246	1.63625	93.75
.00204	.00322	1.57080	90.00
.00267	.00420	1.50535	86.25
.00349	.00552	1.43990	82.50
.00460	.00726	1.37445	78.75
.00609	.00951	1.30900	75.00
.00804	.01240	1.24355	71.25
.01056	.01612	1.17810	67.50
.01386	.02090	1.11265	63.75
.01827	.02699	1.04720	60.00
.02413	.03461	.98175	56.25
.03180	.04400	.91630	52.50
.04171	.05532	.85085	48.75
.05456	.06853	.78540	45.00
.07126	.08307	.71995	41.25
.09265	.09784	.65450	37.50
.11922	.11107	.58905	33.75
.15108	.11991	.52360	30.00
.18745	.11983	.45815	26.25
.22544	.10503	.39270	22.50
.25967	.07074	.32725	18.75
.28297	.01488	.26180	15.00
.28493	-.06186	.19635	11.25
.24727	-.15247	.13090	7.50
.14977	-.23379	.06545	3.75
.00000	-.26789	.00000	.00

3%

-.26789 -2%

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

EPTH: FINITE, HEIGHT/DEPTH= .5839

VE HEIGHT 1.858611E-03,DIMENSIONLESS WITH RESPECT TO PERIOD

URRENT CRITERION: EULER , MAGNITUDE= -.14

LUTION OF ORDER 18 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

ATER DEPTH	.35115
AVE HEIGHT	.20504
AVE PERIOD	10.503
AVE SPEED	.59821
EAN EULERIAN FLUID SPEED	-6.46543E-02
EAN MASS TRANSPORT SPEED	-4.99257E-02
AN FLUID SPEED RELATIVE TO WAVE	.66287
LUME FLUX DUE TO WAVES	5.17194E-03
RNOULLI CONSTANT	.22236

UTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.17293	.28377	.00000	.00000	-.27671	.00000	.0805248	.0000000	.0422011	.0000000	.0000000	.0000000	.0000000	.0000000
.15109	.26546	.00000	.00000	-.26557	.01591	.0704707	.0000000	.0353932	.0000000	.0016486	.0000000	.0008472	.0000000
.12925	.24885	.00000	.00000	-.25312	.03208	.0619278	.0000000	.0297503	.0000000	.0030942	.0000000	.0015584	.0000000
.10742	.23377	.00000	.00000	-.23987	.04854	.0546476	.0000000	.0250596	.0000000	.0043670	.0000000	.0021569	.0000000
.08558	.22006	.00000	.00000	-.22620	.06528	.0484272	.0000000	.0211496	.0000000	.0054924	.0000000	.0026614	.0000000
.06374	.20760	.00000	.00000	-.21236	.08233	.0430995	.0000000	.0178817	.0000000	.0064917	.0000000	.0030876	.0000000
.04191	.19628	.00000	.00000	-.19856	.09968	.0385269	.0000000	.0151433	.0000000	.0073829	.0000000	.0034481	.0000000
.02007	.18600	.00000	.00000	-.18494	.11733	.0345951	.0000000	.0128424	.0000000	.0081813	.0000000	.0037537	.0000000
-.00176	.17666	.00000	.00000	-.17157	.13528	.0312094	.0000000	.0109041	.0000000	.0088997	.0000000	.0040130	.0000000
-.02360	.16820	.00000	.00000	-.15854	.15351	.0282907	.0000000	.0092665	.0000000	.0095494	.0000000	.0042332	.0000000
-.04544	.16054	.00000	.00000	-.14586	.17202	.0257729	.0000000	.0078791	.0000000	.0101396	.0000000	.0044204	.0000000
-.06727	.15363	.00000	.00000	-.13356	.19081	.0236007	.0000000	.0066996	.0000000	.0106787	.0000000	.0045796	.0000000
-.08911	.14740	.00000	.00000	-.12163	.20986	.0217277	.0000000	.0056935	.0000000	.0111736	.0000000	.0047149	.0000000
-.11095	.14183	.00000	.00000	-.11008	.22917	.0201150	.0000000	.0048317	.0000000	.0116305	.0000000	.0048298	.0000000
-.13278	.13686	.00000	.00000	-.09887	.24872	.0187299	.0000000	.0040899	.0000000	.0120546	.0000000	.0049272	.0000000
-.15462	.13246	.00000	.00000	-.08800	.26852	.0175448	.0000000	.0034481	.0000000	.0124506	.0000000	.0050095	.0000000
-.17646	.12860	.00000	.00000	-.07743	.28855	.0165369	.0000000	.0028889	.0000000	.0128228	.0000000	.0050787	.0000000
-.19829	.12525	.00000	.00000	-.06714	.30881	.0156869	.0000000	.0023978	.0000000	.0131746	.0000000	.0051364	.0000000
-.22013	.12239	.00000	.00000	-.05709	.32929	.0149791	.0000000	.0019625	.0000000	.0135094	.0000000	.0051840	.0000000
-.24197	.12000	.00000	.00000	-.04725	.34999	.0144003	.0000000	.0015723	.0000000	.0138302	.0000000	.0052226	.0000000
-.26380	.11807	.00000	.00000	-.03759	.37090	.0139403	.0000000	.0012176	.0000000	.0141396	.0000000	.0052531	.0000000
-.28564	.11658	.00000	.00000	-.02807	.39202	.0135906	.0000000	.0008903	.0000000	.0144402	.0000000	.0052761	.0000000
-.30748	.11552	.00000	.00000	-.01865	.41334	.0133451	.0000000	.0005828	.0000000	.0147343	.0000000	.0052922	.0000000
-.32931	.11489	.00000	.00000	-.00931	.43488	.0131995	.0000000	.0002882	.0000000	.0150241	.0000000	.0053017	.0000000
-.35115	.11468	.00000	.00000	.00000	.45661	.0131513	.0000000	.0000000	.0000000	.0153118	.0000000	.0053048	.0000000

TION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.11164	.15004	.14030	.29566	-.05607	.00046	.0225134	.2956587	.0104189	.1368266	.0000000	.0000000	.0000000	.0000000
.09235	.14438	.12980	.27509	-.06144	.01860	.0208460	.2750878	.0092453	.1220023	.0004180	.0055028	.0001896	.0024955
.07307	.13904	.12005	.25625	-.06504	.03667	.0193308	.2562456	.0082005	.1087046	.0008054	.0106256	.0003578	.0047198
.05379	.13400	.11097	.23901	-.06717	.05467	.0179557	.2390072	.0072709	.0967830	.0011649	.0154005	.0005070	.0067010
.03451	.12926	.10251	.22325	-.06809	.07265	.0167092	.2232542	.0064440	.0860991	.0014991	.0198573	.0006392	.0084642
.01522	.12482	.09460	.20888	-.06800	.09062	.0155805	.2088759	.0057083	.0765263	.0018104	.0240236	.0007564	.0100321
-.00406	.12066	.08719	.19577	-.06708	.10860	.0145599	.1957690	.0050536	.0679493	.0021010	.0279250	.0008601	.0114251
-.02334	.11678	.08024	.18384	-.06548	.12660	.0136383	.1838382	.0044707	.0602634	.0023729	.0315849	.0009519	.0126612
-.04262	.11317	.07370	.17300	-.06332	.14464	.0128074	.1729962	.0039514	.0533735	.0026279	.0350253	.0010331	.0137568
-.06191	.10982	.06753	.16316	-.06070	.16273	.0120597	.1631629	.0034881	.0471934	.0028676	.0382663	.0011049	.0147264
-.08119	.10672	.06170	.15427	-.05771	.18087	.0113883	.1542655	.0030744	.0416453	.0030937	.0413268	.0011681	.0155830
-.10047	.10386	.05616	.14624	-.05440	.19907	.0107870	.1462381	.0027040	.0366583	.0033075	.0442240	.0012238	.0163379
-.11976	.10124	.05090	.13902	-.05085	.21734	.0102504	.1390212	.0023719	.0321685	.0035103	.0469743	.0012728	.0170015
-.13904	.09886	.04588	.13256	-.04709	.23567	.0097733	.1325613	.0020730	.0281176	.0037034	.0495927	.0013156	.0175828
-.15832	.09670	.04107	.12681	-.04318	.25409	.0093515	.1268109	.0018032	.0244526	.0038878	.0520934	.0013530	.0180896
-.17760	.09477	.03645	.12173	-.03913	.27258	.0089808	.1217275	.0015586	.0211252	.0040645	.0544897	.0013854	.0185290
-.19689	.09305	.03200	.11727	-.03498	.29114	.0086579	.1172738	.0013356	.0180909	.0042346	.0567940	.0014133	.0189071
-.21617	.09154	.02770	.11342	-.03075	.30979	.0083798	.1134172	.0011311	.0153090	.0043988	.0590182	.0014371	.0192292
-.23545	.09024	.02352	.11013	-.02645	.32852	.0081437	.1101296	.0009422	.0127416	.0045581	.0611735	.0014571	.0194996
-.25474	.08915	.01944	.10739	-.02211	.34734	.0079476	.1073870	.0007663	.0103536	.0047133	.0632706	.0014736	.0197223
-.27402	.08826	.01545	.10517	-.01773	.36624	.0077897	.1051697	.0006008	.0081118	.0048650	.0653200	.0014868	.0199003
-.29330	.08757	.01153	.10346	-.01332	.38522	.0076683	.1034614	.0004436	.0059851	.0050141	.0673314	.0014968	.0200362
-.31258	.08708	.00766	.10225	-.00889	.40429	.0075824	.1022499	.0002924	.0039433	.0051611	.0693148	.0015039	.0201319
-.33187	.08678	.00382	.10153	-.00445	.42344	.0075312	.1015265	.0001452	.0019577	.0053068	.0712795	.0015081	.0201888
-.35115	.08668	.00000	.10129	.00000	.44268	.0075142	.1012860	.0000000	.0000000	.0054519	.0732349	.0015095	.0202077

TION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.04300	.01141	.11999	.22729	.11131	.00000	.0001303	.2272912	.0000513	.0895864	.0000000	.0000000	.0000000	.0000000
.02658	.01305	.11338	.22076	.09988	.01816	.0001704	.2207635	.0000644	.0833880	.0000025	.0036792	.0000010	.0014204
.01015	.01451	.10700	.21446	.08955	.03613	.0002105	.2144626	.0000761	.0774859	.0000056	.0072530	.0000021	.0027414
-.00627	.01580	.10081	.20841	.08022	.05395	.0002495	.2084062	.0000861	.0718751	.0000094	.0107253	.0000034	.0039678
-.02269	.01693	.09482	.20261	.07179	.07162	.0002867	.2026083	.0000942	.0665481	.0000138	.0141004	.0000049	.0051045
-.03911	.01793	.08901	.19708	.06418	.08916	.0003216	.1970795	.0001004	.0614955	.0000188	.0173824	.0000065	.0061559
-.05554	.01881	.08337	.19183	.05730	.10658	.0003540	.1918280	.0001046	.0567065	.0000243	.0205758	.0000082	.0071265
-.07196	.01959	.07790	.18686	.05108	.12389	.0003836	.1868598	.0001071	.0521691	.0000304	.0236854	.0000099	.0080205
-.08838	.02026	.07257	.18218	.04546	.14110	.0004106	.1821787	.0001079	.0478703	.0000369	.0267157	.0000117	.0088420
-.10481	.02085	.06738	.17779	.04038	.15823	.0004349	.1777875	.0001071	.0437966	.0000438	.0296716	.0000135	.0095947
-.12123	.02137	.06232	.17369	.03578	.17528	.0004566	.1736872	.0001050	.0399341	.0000512	.0325577	.0000152	.0102823
-.13765	.02181	.05738	.16988	.03161	.19225	.0004758	.1698785	.0001016	.0362685	.0000588	.0353788	.0000169	.0109080
-.15407	.02220	.05256	.16636	.02784	.20916	.0004928	.1663607	.0000971	.0327854	.0000668	.0381398	.0000185	.0114750
-.17050	.02253	.04783	.16313	.02441	.22601	.0005077	.1631331	.0000917	.0294702	.0000750	.0408455	.0000201	.0119862
-.18692	.02282	.04319	.16019	.02128	.24281	.0005206	.1601942	.0000855	.0263084	.0000834	.0435004	.0000215	.0124442
-.20334	.02306	.03864	.15754	.01843	.25956	.0005317	.1575425	.0000786	.0232856	.0000921	.0461095	.0000229	.0128515
-.21977	.02326	.03416	.15518	.01582	.27626	.0005412	.1551761	.0000711	.0203875	.0001009	.0486774	.0000241	.0132101
-.23619	.02344	.02975	.15309	.01341	.29293	.0005492	.1530933	.0000631	.0175996	.0001098	.0512087	.0000252	.0135220
-.25261	.02358	.02540	.15129	.01118	.30955	.0005559	.1512923	.0000548	.0149079	.0001189	.0537081	.0000262	.0137890
-.26903	.02369	.02109	.14977	.00909	.32614	.0005613	.1497716	.0000461	.0122984	.0001281	.0561803	.0000270	.0140124
-.28546	.02378	.01682	.14853	.00713	.34270	.0005656	.1485295	.0000372	.0097571	.0001373	.0586298	.0000277	.0141935
-.30188	.02385	.01259	.14756	.00527	.35922	.0005689	.1475648	.0000280	.0072703	.0001467	.0610611	.0000282	.0143333
-.31830	.02390	.00838	.14688	.00347	.37571	.0005712	.1468765	.0000188	.0048243	.0001560	.0634789	.0000286	.0144326
-.33473	.02393	.00419	.14646	.00172	.39218	.0005726	.1464638	.0000094	.0024054	.0001654	.0658876	.0000288	.0144920
-.35115	.02394	.00000	.14633	.00000	.40862	.0005730	.1463263	.0000000	.0000000	.0001748	.0682919	.0000289	.0145117

WATER SURFACE ELEVATION

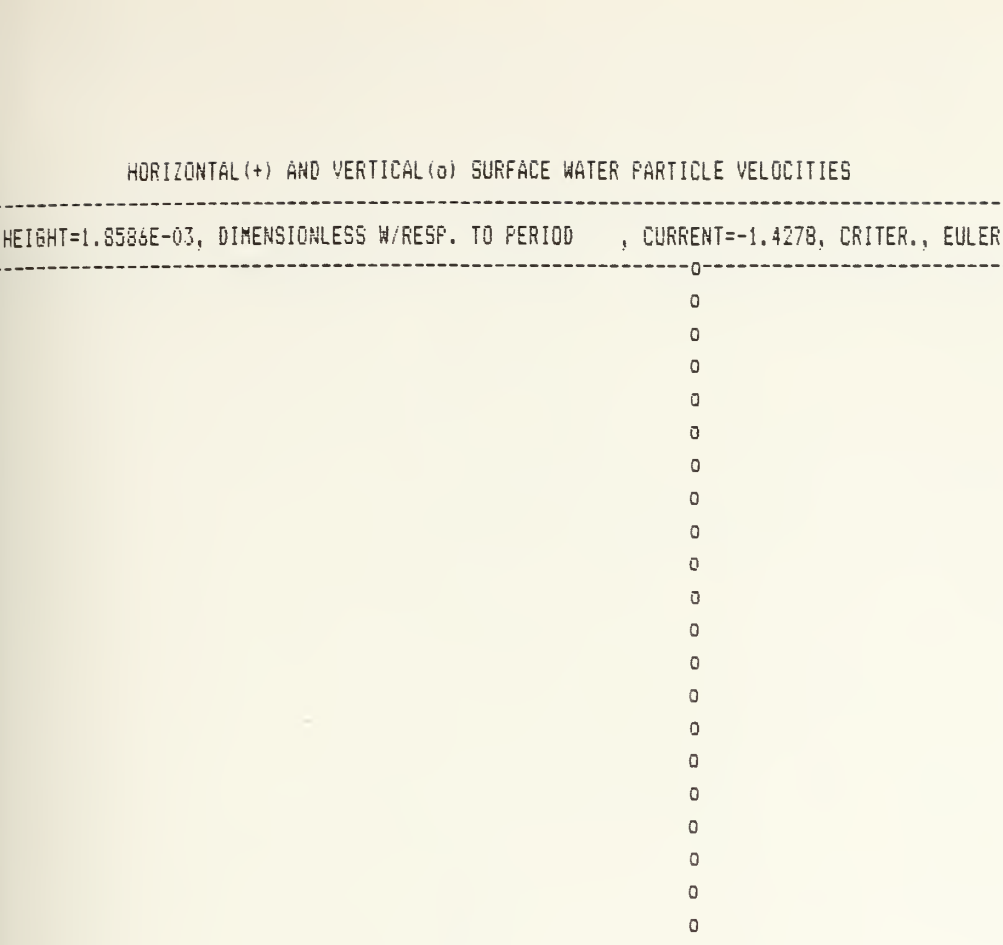
=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=-1.4278, CRITER., EULER

ELEV.VS.	TIME	DIST.	ANGLE
*K	(K*G)^.5	*K	DEGREES
-.03211	5.25163	3.14159	180.00
-.03211	5.14222	3.07614	176.25
-.03211	5.03281	3.01069	172.50
-.03210	4.92340	2.94524	168.75
-.03208	4.81399	2.87979	165.00
-.03208	4.70458	2.81434	161.25
-.03209	4.59517	2.74889	157.50
-.03209	4.48577	2.68344	153.75
-.03204	4.37636	2.61799	150.00
-.03198	4.26695	2.55254	146.25
-.03195	4.15754	2.48709	142.50
-.03196	4.04813	2.42164	138.75
-.03195	3.93872	2.35619	135.00
-.03186	3.82931	2.29074	131.25
-.03172	3.71990	2.22529	127.50
-.03162	3.61049	2.15984	123.75
-.03157	3.50108	2.09440	120.00
-.03151	3.39168	2.02895	116.25
-.03133	3.28227	1.96350	112.50
-.03103	3.17286	1.89805	108.75
-.03071	3.06345	1.83260	105.00
-.03046	2.95404	1.76715	101.25
-.03019	2.84463	1.70170	97.50
-.02975	2.73522	1.63625	93.75
-.02906	2.62581	1.57080	90.00
-.02822	2.51640	1.50535	86.25
-.02736	2.40700	1.43990	82.50
-.02645	2.29759	1.37445	78.75
-.02523	2.18818	1.30900	75.00
-.02351	2.07877	1.24355	71.25
-.02133	1.96936	1.17810	67.50
-.01886	1.85995	1.11265	63.75
-.01610	1.75054	1.04720	60.00
-.01272	1.64113	.98175	56.25
-.00833	1.53172	.91630	52.50
-.00281	1.42232	.85085	48.75
.00369	1.31291	.78540	45.00
.01108	1.20350	.71995	41.25
.01973	1.09409	.65450	37.50
.03025	.98468	.58905	33.75
.04300	.87527	.52360	30.00
.05777	.76586	.45815	26.25
.07411	.65645	.39270	22.50
.09198	.54704	.32725	18.75
.11164	.43764	.26180	15.00
.13263	.32823	.19635	11.25
.15260	.21882	.13090	7.50
.16741	.10941	.06545	3.75
.17293	.00000	.00000	.00

-.03211

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=-1.4278, CRITER., EULER

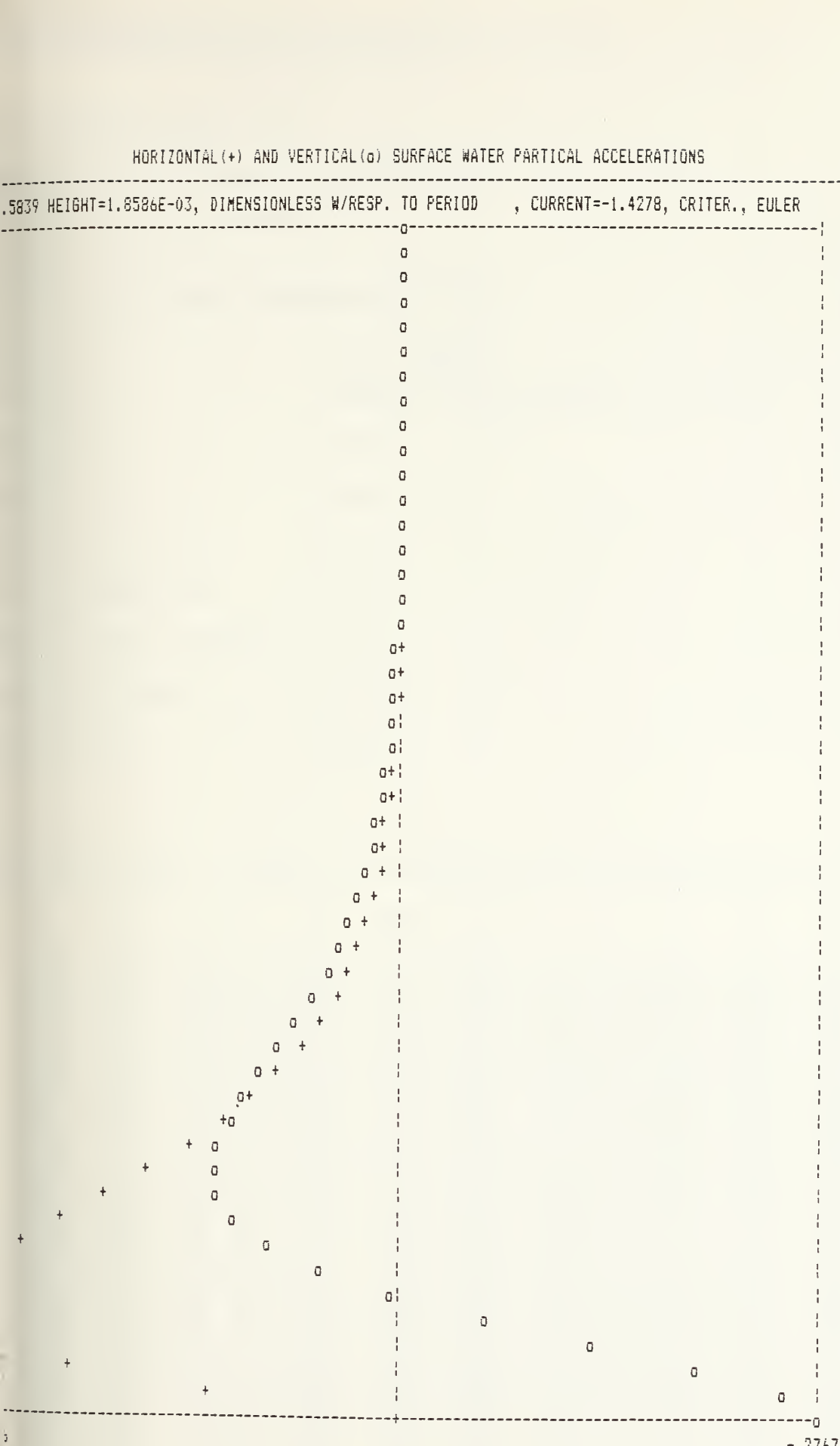


U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.11520	.00000	3.14159	180.00
-.11520	.00002	3.07614	176.25
-.11519	.00004	3.01069	172.50
-.11518	.00006	2.94524	168.75
-.11517	.00009	2.87979	165.00
-.11516	.00012	2.81434	161.25
-.11514	.00015	2.74889	157.50
-.11512	.00019	2.68344	153.75
-.11509	.00024	2.61799	150.00
-.11506	.00030	2.55254	146.25
-.11502	.00037	2.48709	142.50
-.11496	.00046	2.42164	138.75
-.11490	.00057	2.35619	135.00
-.11481	.00071	2.29074	131.25
-.11471	.00087	2.22529	127.50
-.11459	.00108	2.15984	123.75
-.11443	.00133	2.09440	120.00
-.11424	.00163	2.02895	116.25
-.11401	.00201	1.96350	112.50
-.11372	.00248	1.89805	108.75
-.11336	.00305	1.83260	105.00
-.11292	.00375	1.76715	101.25
-.11237	.00461	1.70170	97.50
-.11170	.00567	1.63625	93.75
-.11087	.00697	1.57080	90.00
-.10985	.00856	1.50535	86.25
-.10858	.01049	1.43990	82.50
-.10701	.01284	1.37445	78.75
-.10507	.01569	1.30900	75.00
-.10268	.01915	1.24355	71.25
-.09973	.02333	1.17810	67.50
-.09608	.02832	1.11265	63.75
-.09153	.03424	1.04720	60.00
-.08591	.04121	.98175	56.25
-.07898	.04938	.91630	52.50
-.07045	.05882	.85085	48.75
-.05992	.06951	.78540	45.00
-.04694	.08128	.71995	41.25
-.03103	.09389	.65450	37.50
-.01175	.10700	.58905	33.75
.01141	.11999	.52360	30.00
.03903	.13170	.45815	26.25
.07146	.14036	.39270	22.50
.10864	.14397	.32725	18.75
.15004	.14030	.26180	15.00
.19428	.12650	.19635	11.25
.23736	.09887	.13090	7.50
.27082	.05529	.06545	3.75
.28377	.00000	.00000	.00

-.11520

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=-1.4278, CRITER., EULER



Ax ‡1/6	Ay ‡1/6	DIST. ‡K	ANGLE DEGREES
.00000	.00021	3.14159	180.00
.00003	.00022	3.07614	176.25
.00006	.00023	3.01069	172.50
.00009	.00026	2.94524	168.75
.00012	.00029	2.87979	165.00
.00016	.00034	2.81434	161.25
.00021	.00041	2.74889	157.50
.00027	.00049	2.68344	153.75
.00034	.00059	2.61799	150.00
.00042	.00071	2.55254	146.25
.00052	.00087	2.48709	142.50
.00065	.00108	2.42164	138.75
.00080	.00132	2.35619	135.00
.00100	.00162	2.29074	131.25
.00123	.00199	2.22529	127.50
.00151	.00245	2.15984	123.75
.00186	.00302	2.09440	120.00
.00230	.00372	2.02895	116.25
.00284	.00457	1.96350	112.50
.00351	.00560	1.89805	108.75
.00431	.00688	1.83260	105.00
.00531	.00844	1.76715	101.25
.00656	.01036	1.70170	97.50
.00810	.01268	1.63625	93.75
.00999	.01550	1.57080	90.00
.01231	.01890	1.50535	86.25
.01516	.02300	1.43990	82.50
.01871	.02792	1.37445	78.75
.02309	.03375	1.30900	75.00
.02846	.04060	1.24355	71.25
.03503	.04858	1.17810	67.50
.04309	.05771	1.11265	63.75
.05299	.06793	1.04720	60.00
.06507	.07907	.98175	56.25
.07962	.09080	.91630	52.50
.09697	.10253	.85085	48.75
.11745	.11322	.78540	45.00
.14119	.12134	.71995	41.25
.16795	.12509	.65450	37.50
.19707	.12249	.58905	33.75
.22729	.11131	.52360	30.00
.25635	.08905	.45815	26.25
.28061	.05372	.39270	22.50
.29546	.00488	.32725	18.75
.29566	-.05607	.26180	15.00
.27398	-.12581	.19635	11.25
.22007	-.19691	.13090	7.50
.12579	-.25410	.06545	3.75
.00000	-.27671	.00000	.00

-.27671

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

DEPTH: FINITE, HEIGHT/DEPTH= .5839

WAVE HEIGHT 1.858611E-03,DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= -.29

2 ORDER

SOLUTION, NON-DIMENSIONALIZED BY WAVENUMBER ,2 HT STEPS

WATER DEPTH	.40058
WAVE HEIGHT	.23390
WAVE PERIOD	11.218
WAVE SPEED	.56009
MEAN EULERIAN FLUID SPEED	-.13811
MEAN MASS TRANSPORT SPEED	-.12112
MEAN FLUID SPEED RELATIVE TO WAVE	.69820
VOLUME FLUX DUE TO WAVES	6.80472E-03
BERNOULLI CONSTANT	.24696

28%
H=1.25M
K=.18712
L=33.6M

OLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.19304	.23170	.00000	.00000	-.28133	.00000	.0536866	.0000000	.0318693	.0000000	.0000000	.0000000	.0000000	.0000000
.16830	.21154	.00000	.00000	-.27035	.01791	.0447474	.0000000	.0254560	.0000000	.0012173	.0000000	.0007089	.0000000
.14357	.19327	.00000	.00000	-.25789	.03611	.0373515	.0000000	.0203248	.0000000	.0022327	.0000000	.0012751	.0000000
.11884	.17670	.00000	.00000	-.24453	.05463	.0312219	.0000000	.0162171	.0000000	.0030807	.0000000	.0017270	.0000000
.09410	.16166	.00000	.00000	-.23066	.07348	.0261347	.0000000	.0129283	.0000000	.0037900	.0000000	.0020875	.0000000
.06937	.14801	.00000	.00000	-.21659	.09269	.0219079	.0000000	.0102955	.0000000	.0043842	.0000000	.0023747	.0000000
.04463	.13562	.00000	.00000	-.20253	.11224	.0183932	.0000000	.0081889	.0000000	.0048826	.0000000	.0026033	.0000000
.01990	.12437	.00000	.00000	-.18863	.13213	.0154691	.0000000	.0065044	.0000000	.0053013	.0000000	.0027850	.0000000
-.00483	.11419	.00000	.00000	-.17498	.15237	.0130360	.0000000	.0051589	.0000000	.0056539	.0000000	.0029292	.0000000
-.02957	.10494	.00000	.00000	-.16167	.17294	.0110116	.0000000	.0040854	.0000000	.0059513	.0000000	.0030436	.0000000
-.05430	.09658	.00000	.00000	-.14872	.19384	.0093279	.0000000	.0032300	.0000000	.0062028	.0000000	.0031340	.0000000
-.07904	.08904	.00000	.00000	-.13615	.21505	.0079287	.0000000	.0025494	.0000000	.0064162	.0000000	.0032055	.0000000
-.10377	.08226	.00000	.00000	-.12397	.23657	.0067674	.0000000	.0020086	.0000000	.0065980	.0000000	.0032619	.0000000
-.12850	.07619	.00000	.00000	-.11218	.25838	.0058053	.0000000	.0015795	.0000000	.0067535	.0000000	.0033062	.0000000
-.15324	.07078	.00000	.00000	-.10074	.28048	.0050102	.0000000	.0012392	.0000000	.0068872	.0000000	.0033411	.0000000
-.17797	.06600	.00000	.00000	-.08965	.30286	.0043554	.0000000	.0009695	.0000000	.0070030	.0000000	.0033684	.0000000
-.20271	.06180	.00000	.00000	-.07887	.32551	.0038188	.0000000	.0007556	.0000000	.0071041	.0000000	.0033898	.0000000
-.22744	.05816	.00000	.00000	-.06838	.34843	.0033822	.0000000	.0005856	.0000000	.0071932	.0000000	.0034063	.0000000
-.25217	.05505	.00000	.00000	-.05814	.37160	.0030305	.0000000	.0004497	.0000000	.0072725	.0000000	.0034191	.0000000
-.27691	.05246	.00000	.00000	-.04811	.39502	.0027516	.0000000	.0003403	.0000000	.0073440	.0000000	.0034299	.0000000
-.30164	.05036	.00000	.00000	-.03827	.41868	.0025358	.0000000	.0002509	.0000000	.0074094	.0000000	.0034362	.0000000
-.32638	.04874	.00000	.00000	-.02857	.44259	.0023754	.0000000	.0001763	.0000000	.0074701	.0000000	.0034415	.0000000
-.35111	.04759	.00000	.00000	-.01899	.46674	.0022647	.0000000	.0001120	.0000000	.0075275	.0000000	.0034451	.0000000
-.37584	.04690	.00000	.00000	-.00948	.49112	.0021999	.0000000	.0000544	.0000000	.0075827	.0000000	.0034471	.0000000
-.40058	.04667	.00000	.00000	.00000	.51574	.0021785	.0000000	.0000000	.0000000	.0076369	.0000000	.0034478	.0000000

LUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

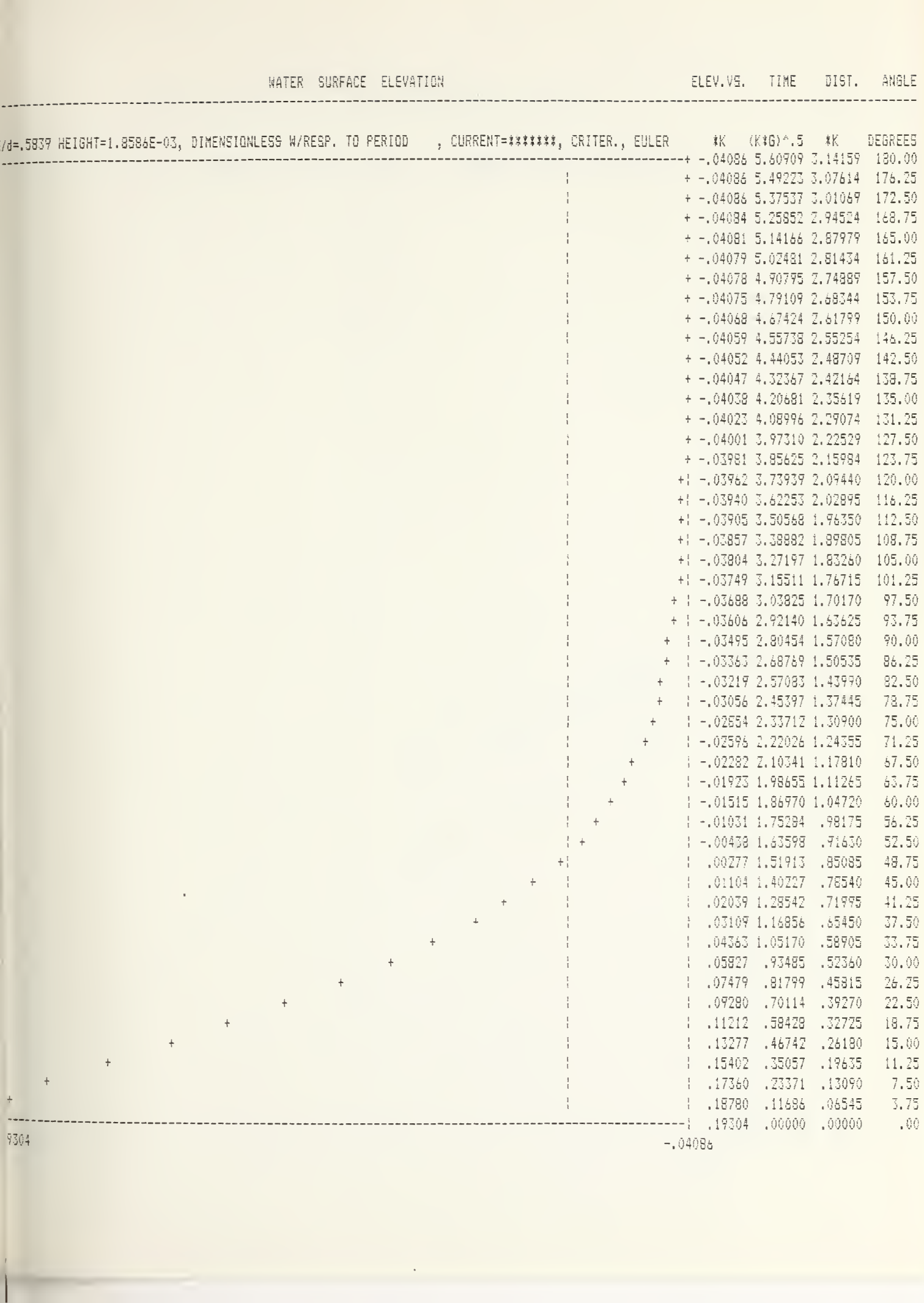
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.13277	.10600	.14670	.29575	-.08488	.00033	.0112353	.2957457	.0059923	.1577348	.0000000	.0000000	.0000000	.0000000
.11054	.09825	.13527	.27372	-.08899	.02062	.0096536	.2737181	.0049342	.1399037	.0002321	.0063275	.0001214	.0033072
.08832	.09100	.12472	.25363	-.09119	.04083	.0082805	.2536347	.0040483	.1240021	.0004314	.0121871	.0002212	.0062395
.06610	.08421	.11494	.23535	-.09184	.06102	.0070912	.2353453	.0033093	.1098304	.0006022	.0176204	.0003030	.0088377
.04388	.07787	.10588	.21871	-.09123	.08121	.0060637	.2187078	.0026950	.0972058	.0007483	.0226655	.0003697	.0111382
.02165	.07196	.09745	.20359	-.08961	.10142	.0051781	.2035895	.0021864	.0859620	.0008733	.0273578	.0004239	.0131734
-.00057	.06646	.08960	.18987	-.08717	.12168	.0044167	.1899674	.0017667	.0759487	.0009799	.0317297	.0004679	.0149725
-.02279	.06135	.08226	.17743	-.08409	.14199	.0037639	.1774283	.0014219	.0670301	.0010708	.0358108	.0005033	.0165612
-.04501	.05662	.07539	.16617	-.08048	.16239	.0032057	.1661692	.0011398	.0590838	.0011482	.0396287	.0005317	.0179625
-.06724	.05225	.06894	.15600	-.07646	.18287	.0027299	.1559960	.0009100	.0519999	.0012142	.0432084	.0005545	.0191968
-.08946	.04822	.06287	.14682	-.07212	.20344	.0023256	.1468240	.0007235	.0456796	.0012703	.0465731	.0005727	.0202821
-.11168	.04453	.05713	.13858	-.06752	.22411	.0019832	.1385766	.0005729	.0400342	.0013182	.0497443	.0005871	.0212345
-.13391	.04116	.05169	.13119	-.06273	.24488	.0016943	.1311852	.0004518	.0349835	.0013591	.0527417	.0005985	.0220681
-.15613	.03810	.04652	.12459	-.05779	.26577	.0014517	.1245884	.0003549	.0304557	.0013940	.0555837	.0006074	.0227952
-.17835	.03534	.04159	.11873	-.05273	.28676	.0012489	.1187319	.0002775	.0263855	.0014240	.0582873	.0006145	.0234268
-.20057	.03287	.03687	.11357	-.04759	.30787	.0010803	.1135675	.0002161	.0227140	.0014499	.0608685	.0006199	.0239723
-.22280	.03068	.03233	.10905	-.04239	.32909	.0009412	.1090529	.0001673	.0193876	.0014724	.0633421	.0006242	.0244401
-.24502	.02876	.02796	.10515	-.03715	.35043	.0008273	.1051513	.0001287	.0163573	.0014920	.0657222	.0006275	.0248373
-.26724	.02712	.02372	.10183	-.03188	.37189	.0007353	.1018311	.0000980	.0135778	.0015094	.0680221	.0006300	.0251699
-.28946	.02573	.01959	.09907	-.02658	.39346	.0006621	.0990655	.0000736	.0110075	.0015249	.0702543	.0006319	.0254431
-.31169	.02460	.01556	.09683	-.02128	.41515	.0006054	.0968323	.0000538	.0086075	.0015390	.0724310	.0006333	.0256611
-.33391	.02373	.01161	.09511	-.01596	.43696	.0005632	.0951136	.0000375	.0063411	.0015520	.0745638	.0006343	.0258272
-.35613	.02311	.00771	.09390	-.01064	.45889	.0005341	.0938957	.0000237	.0041732	.0015642	.0766640	.0006350	.0259440
-.37836	.02274	.00385	.09317	-.00532	.48093	.0005171	.0931687	.0000115	.0020705	.0015759	.0787425	.0006354	.0260134
-.40058	.02262	.00000	.09293	.00000	.50310	.0005114	.0929271	.0000000	.0000000	.0015873	.0808103	.0006355	.0260364

LUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .5839, WAVE HEIGHT=1.85861E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.05827	-.03809	.13985	.25597	.09480	.00000	-.0014506	.2559717	-.0006656	.1174523	.0000000	.0000000	.0000000	.0000000
.03915	-.03712	.13160	.24622	.08292	.02082	-.0013780	.2462173	-.0006060	.1082691	-.0000270	.0048006	-.0000122	.0021577
.02003	-.03633	.12369	.23696	.07239	.04142	-.0013198	.2369564	-.0005551	.0996665	-.0000528	.0094194	-.0000233	.0041455
.00091	-.03569	.11610	.22819	.06307	.06183	-.0012735	.2281879	-.0005113	.0916158	-.0000776	.0138659	-.0000334	.0059740
-.01820	-.03517	.10881	.21991	.05483	.08207	-.0012371	.2199082	-.0004730	.0840872	-.0001016	.0181494	-.0000429	.0076536
-.03732	-.03477	.10180	.21211	.04755	.10217	-.0012090	.2121117	-.0004392	.0770507	-.0001250	.0222792	-.0000516	.0091940
-.05644	-.03446	.09505	.20479	.04113	.12213	-.0011879	.2047912	-.0004088	.0704761	-.0001479	.0262646	-.0000597	.0106043
-.07556	-.03424	.08854	.19794	.03548	.14198	-.0011724	.1979386	-.0003810	.0643336	-.0001705	.0301144	-.0000672	.0118929
-.09468	-.03408	.08226	.19154	.03051	.16173	-.0011617	.1915448	-.0003554	.0585934	-.0001928	.0338376	-.0000743	.0130680
-.11380	-.03398	.07618	.18560	.02615	.18139	-.0011549	.1856003	-.0003312	.0532265	-.0002149	.0374429	-.0000808	.0141370
-.13292	-.03393	.07028	.18010	.02233	.20097	-.0011514	.1800952	-.0003082	.0482046	-.0002370	.0409387	-.0000869	.0151066
-.15204	-.03392	.06457	.17502	.01900	.22049	-.0011503	.1750197	-.0002859	.0434999	-.0002590	.0443333	-.0000926	.0159832
-.17115	-.03393	.05901	.17036	.01609	.23994	-.0011513	.1703642	-.0002641	.0390857	-.0002810	.0476350	-.0000979	.0167727
-.19027	-.03397	.05360	.16612	.01357	.25934	-.0011538	.1661193	-.0002426	.0349358	-.0003030	.0508515	-.0001027	.0174803
-.20939	-.03402	.04833	.16228	.01137	.27870	-.0011573	.1622759	-.0002213	.0310250	-.0003251	.0539908	-.0001072	.0181108
-.22851	-.03408	.04316	.15883	.00947	.29801	-.0011616	.1588256	-.0001999	.0273288	-.0003473	.0570603	-.0001112	.0186686
-.24763	-.03415	.03811	.15576	.00782	.31730	-.0011663	.1557605	-.0001784	.0238235	-.0003695	.0600675	-.0001148	.0191576
-.26675	-.03422	.03315	.15307	.00639	.33655	-.0011710	.1530735	-.0001567	.0204860	-.0003919	.0630198	-.0001180	.0195812
-.28587	-.03429	.02826	.15076	.00515	.35578	-.0011756	.1507582	-.0001349	.0172938	-.0004143	.0659242	-.0001208	.0199424
-.30498	-.03435	.02345	.14881	.00406	.37499	-.0011799	.1488088	-.0001128	.0142252	-.0004368	.0687879	-.0001232	.0202437
-.32410	-.03440	.01869	.14722	.00310	.39417	-.0011836	.1472206	-.0000905	.0112587	-.0004594	.0716177	-.0001251	.0204873
-.34322	-.03445	.01398	.14599	.00224	.41334	-.0011866	.1459895	-.0000681	.0083734	-.0004821	.0744206	-.0001266	.0206749
-.36234	-.03448	.00930	.14511	.00145	.43250	-.0011888	.1451123	-.0000455	.0055487	-.0005048	.0772034	-.0001277	.0208080
-.38146	-.03450	.00465	.14459	.00071	.45164	-.0011902	.1445870	-.0000228	.0027643	-.0005275	.0799727	-.0001284	.0208875

WATER SURFACE ELEVATION

/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=*******, CRITER., EULER



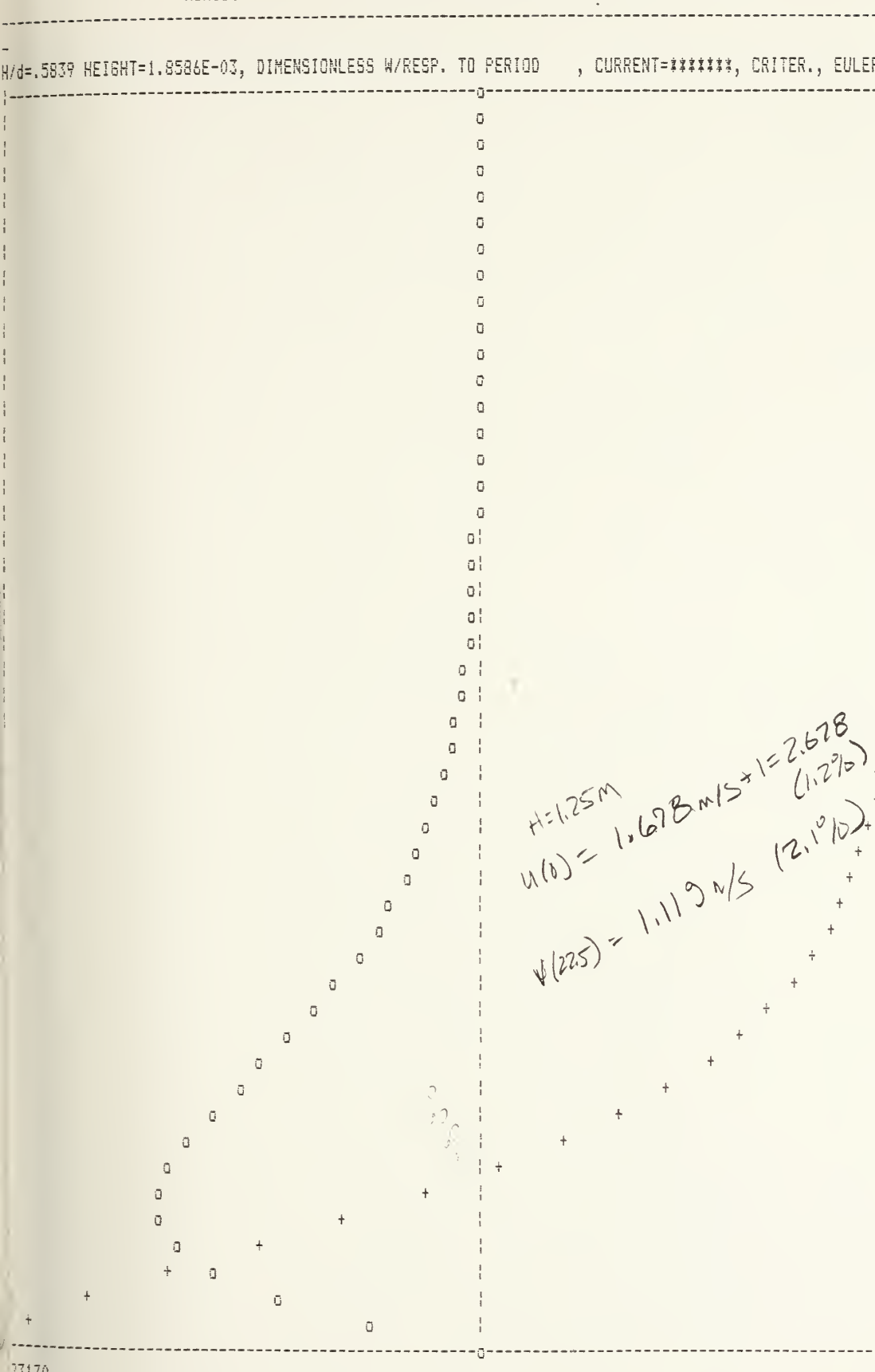
ELEV.VS.	TIME	DIST.	ANGLE
*K	(K*G)^.5	*K	DEGREES
-.04086	5.60909	3.14159	180.00
-.04086	5.49223	3.07614	176.25
-.04086	5.37537	3.01069	172.50
-.04084	5.25852	2.94524	168.75
-.04081	5.14166	2.87979	165.00
-.04079	5.02481	2.81434	161.25
-.04078	4.90795	2.74889	157.50
-.04075	4.79109	2.68344	153.75
-.04068	4.67424	2.61799	150.00
-.04059	4.55738	2.55254	146.25
-.04052	4.44053	2.48709	142.50
-.04047	4.32367	2.42164	138.75
-.04038	4.20681	2.35619	135.00
-.04023	4.08996	2.29074	131.25
-.04001	3.97310	2.22529	127.50
-.03981	3.85625	2.15984	123.75
-.03962	3.73939	2.09440	120.00
-.03940	3.62253	2.02895	116.25
-.03905	3.50568	1.96350	112.50
-.03857	3.38882	1.89805	108.75
-.03804	3.27197	1.83260	105.00
-.03749	3.15511	1.76715	101.25
-.03688	3.03825	1.70170	97.50
-.03606	2.92140	1.63625	93.75
-.03495	2.80454	1.57080	90.00
-.03363	2.68769	1.50535	86.25
-.03219	2.57083	1.43990	82.50
-.03056	2.45397	1.37445	78.75
-.02854	2.33712	1.30900	75.00
-.02596	2.22026	1.24355	71.25
-.02282	2.10341	1.17810	67.50
-.01923	1.98655	1.11265	63.75
-.01515	1.86970	1.04720	60.00
-.01031	1.75284	.98175	56.25
-.00438	1.63598	.91630	52.50
.00277	1.51913	.85085	48.75
.01104	1.40227	.78540	45.00
.02039	1.28542	.71995	41.25
.03109	1.16856	.65450	37.50
.04363	1.05170	.58905	33.75
.05827	.93485	.52360	30.00
.07479	.81799	.45815	26.25
.09280	.70114	.39270	22.50
.11212	.58428	.32725	18.75
.13277	.46742	.26180	15.00
.15402	.35057	.19635	11.25
.17360	.23371	.13090	7.50
.18780	.11686	.06545	3.75
.19304	.00000	.00000	.00

9304

-.04086

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

H/d=.5839 HEIGHT=1.8586E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=*******, CRITER., EULER



U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.19862	.00000	3.14159	180.00
-.19862	.00006	3.07614	176.25
-.19861	.00012	3.01069	172.50
-.19859	.00018	2.94524	168.75
-.19857	.00025	2.87979	165.00
-.19853	.00032	2.81434	161.25
-.19849	.00041	2.74889	157.50
-.19844	.00052	2.68344	153.75
-.19837	.00064	2.61799	150.00
-.19829	.00078	2.55254	146.25
-.19819	.00095	2.48709	142.50
-.19808	.00115	2.42164	138.75
-.19793	.00139	2.35619	135.00
-.19775	.00168	2.29074	131.25
-.19754	.00203	2.22529	127.50
-.19729	.00245	2.15984	123.75
-.19698	.00295	2.09440	120.00
-.19660	.00355	2.02895	116.25
-.19616	.00427	1.96350	112.50
-.19561	.00514	1.89805	108.75
-.19496	.00617	1.83260	105.00
-.19417	.00741	1.76715	101.25
-.19322	.00889	1.70170	97.50
-.19206	.01066	1.63625	93.75
-.19068	.01278	1.57080	90.00
-.18901	.01529	1.50535	86.25
-.18698	.01827	1.43990	82.50
-.18453	.02179	1.37445	78.75
-.18157	.02594	1.30900	75.00
-.17800	.03082	1.24355	71.25
-.17370	.03651	1.17810	67.50
-.16848	.04310	1.11265	63.75
-.16216	.05066	1.04720	60.00
-.15452	.05926	.98175	56.25
-.14533	.06894	.91630	52.50
-.13431	.07969	.85085	48.75
-.12106	.09136	.78540	45.00
-.10519	.10365	.71995	41.25
-.08631	.11619	.65450	37.50
-.06407	.12849	.58905	33.75
-.03809	.13985	.52360	30.00
-.00800	.14906	.45815	26.25
.02630	.15451	.39270	22.50
.06454	.15438	.32725	18.75
.10600	.14670	.26180	15.00
.14899	.12902	.19635	11.25
.18953	.09855	.13090	7.50
.22009	.05418	.06545	3.75
.23170	.00000	.00000	.00

9C. DEEP WATER

4. DIMENSIONAL. FACTORS

5. SAMPLE SCREEN INPUT & DISPLAY

6. COMP. W/ DEAN'S SOL'N

M. M. RIENECKER AND J. D. FENTON.

EPTH: FINITE, HEIGHT/DEPTH= .7500

AVE HEIGHT 2.387324E-03,DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .0000

OLUTION OF ORDER 18 NON-DIMENSIONALIZED BY WAVE NUMBER, 4 HEIGHT STEP(S).

WATER DEPTH	.30427
WAVE HEIGHT	.22820
WAVE PERIOD	9.7769
WAVE SPEED	.64265
MEAN EULERIAN FLUID SPEED	1.30048E-22
MEAN MASS TRANSPORT SPEED	1.28777E-02
MEAN FLUID SPEED RELATIVE TO WAVE	.64265
VOLUME FLUX DUE TO WAVES	3.91825E-03
BERNOULLI CONSTANT	.20773

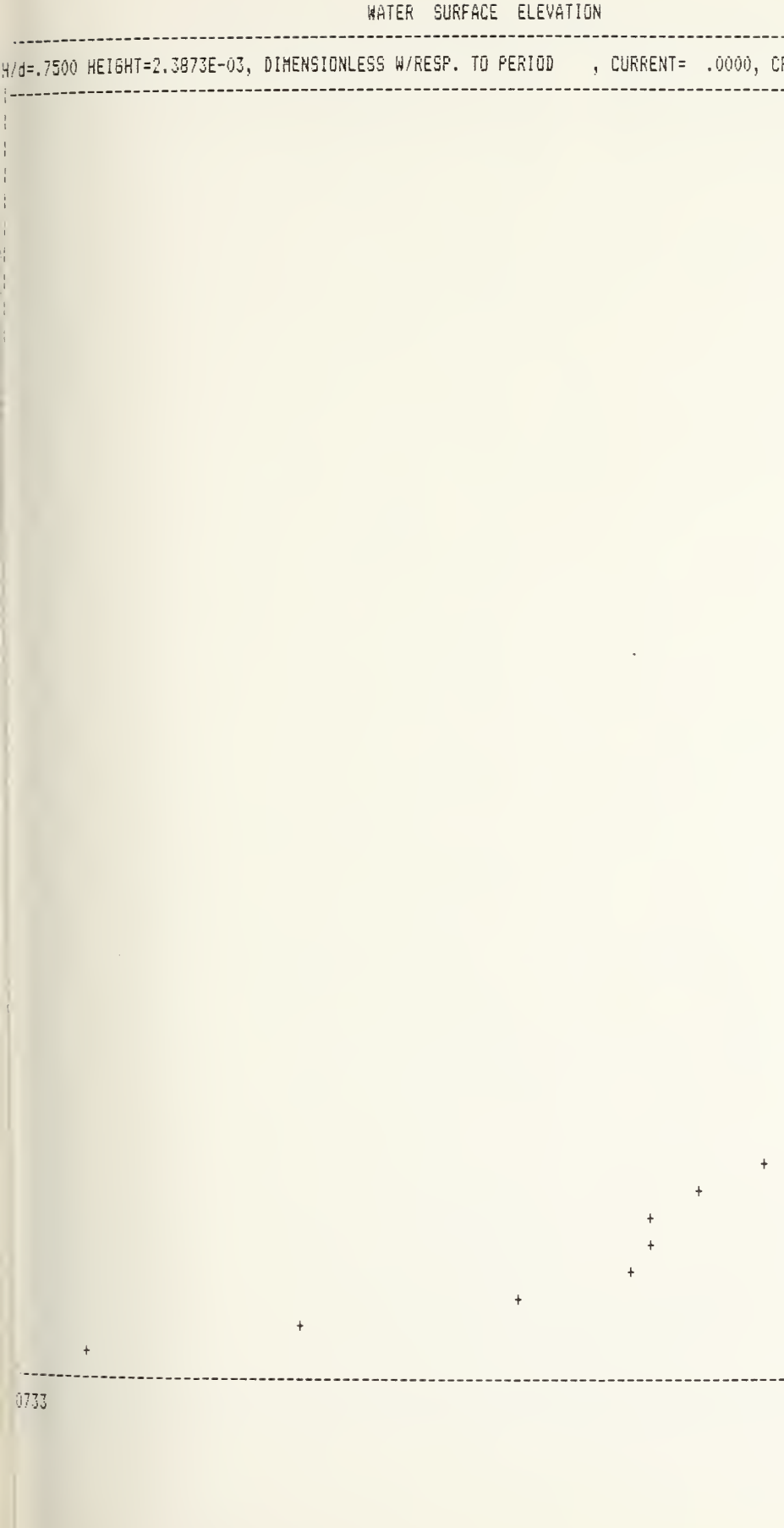
OLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .7500, WAVE HEIGHT=2.38732E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.20733	.67074	.00000	.00000	.13727	.00000	.4498938	.0000000	.2301649	.0000000	.0000000	.0000000	.0000000	.0000000
.18601	.57788	.00000	.00000	-.25077	.01961	.3339461	.0000000	.1637276	.0000000	.0083544	.0000000	.0041982	.0000000
.16470	.50398	.00000	.00000	-.42943	.03341	.2539944	.0000000	.1191145	.0000000	.0146208	.0000000	.0072128	.0000000
.14338	.44459	.00000	.00000	-.49534	.04473	.1976609	.0000000	.0884826	.0000000	.0194347	.0000000	.0094255	.0000000
.12206	.39641	.00000	.00000	-.50206	.05534	.1571401	.0000000	.0669938	.0000000	.0232163	.0000000	.0110826	.0000000
.10075	.35696	.00000	.00000	-.47917	.06617	.1274177	.0000000	.0516061	.0000000	.0262492	.0000000	.0123467	.0000000
.07943	.32437	.00000	.00000	-.44287	.07764	.1052138	.0000000	.0403704	.0000000	.0287286	.0000000	.0133270	.0000000
.05811	.29723	.00000	.00000	-.40184	.08995	.0883438	.0000000	.0320142	.0000000	.0307916	.0000000	.0140985	.0000000
.03680	.27446	.00000	.00000	-.36061	.10314	.0753270	.0000000	.0256914	.0000000	.0325361	.0000000	.0147135	.0000000
.01548	.25523	.00000	.00000	-.32137	.11720	.0651428	.0000000	.0208293	.0000000	.0340333	.0000000	.0152093	.0000000
-.00583	.23891	.00000	.00000	-.28506	.13205	.0570760	.0000000	.0170333	.0000000	.0353359	.0000000	.0156129	.0000000
-.02715	.22498	.00000	.00000	-.25193	.14765	.0506179	.0000000	.0140270	.0000000	.0364837	.0000000	.0159439	.0000000
-.04847	.21308	.00000	.00000	-.22190	.16392	.0454010	.0000000	.0116135	.0000000	.0375071	.0000000	.0162172	.0000000
-.06978	.20287	.00000	.00000	-.19471	.18081	.0411566	.0000000	.0096505	.0000000	.0384297	.0000000	.0164439	.0000000
-.09110	.19413	.00000	.00000	-.17005	.19824	.0376853	.0000000	.0080332	.0000000	.0392700	.0000000	.0166323	.0000000
-.11242	.18665	.00000	.00000	-.14759	.21617	.0348380	.0000000	.0066837	.0000000	.0400430	.0000000	.0167892	.0000000
-.13373	.18028	.00000	.00000	-.12700	.23457	.0325019	.0000000	.0055426	.0000000	.0407607	.0000000	.0169195	.0000000
-.15505	.17490	.00000	.00000	-.10800	.25338	.0305909	.0000000	.0045647	.0000000	.0414332	.0000000	.0170272	.0000000
-.17637	.17041	.00000	.00000	-.09032	.27259	.0290395	.0000000	.0037141	.0000000	.0420687	.0000000	.0171155	.0000000
-.19768	.16673	.00000	.00000	-.07372	.29216	.0277975	.0000000	.0029627	.0000000	.0426745	.0000000	.0171866	.0000000
-.21900	.16379	.00000	.00000	-.05799	.31207	.0268266	.0000000	.0022874	.0000000	.0432567	.0000000	.0172426	.0000000
-.24032	.16155	.00000	.00000	-.04292	.33231	.0260983	.0000000	.0016690	.0000000	.0438208	.0000000	.0172848	.0000000
-.26163	.15997	.00000	.00000	-.02835	.35287	.0255919	.0000000	.0010911	.0000000	.0443717	.0000000	.0173142	.0000000
-.28295	.15904	.00000	.00000	-.01410	.37373	.0252934	.0000000	.0005392	.0000000	.0449141	.0000000	.0173316	.0000000
-.30427	.15873	.00000	.00000	.00000	.39490	.0251948	.0000000	.0000000	.0000000	.0454522	.0000000	.0173373	.0000000

CASE 4D .18 TERMS

WATER SURFACE ELEVATION

H/d=.7500 HEIGHT=2.3873E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



ELEV.VS. *K	TIME (K*6)^.5	DIST. *K	ANGL DEGREE
-.02087	4.88846	3.14159	180.0
-.02094	4.78662	3.07614	176.2
-.02098	4.68478	3.01069	172.5
-.02078	4.58294	2.94524	168.7
-.02056	4.48109	2.87979	165.0
-.02072	4.37925	2.81434	161.2
-.02119	4.27741	2.74889	157.5
-.02136	4.17556	2.68344	153.7
-.02085	4.07372	2.61799	150.0
-.02019	3.97188	2.55254	146.2
-.02028	3.87003	2.48709	142.5
-.02117	3.76819	2.42164	138.7
-.02179	3.66635	2.35619	135.0
-.02121	3.56451	2.29074	131.2
-.01998	3.46266	2.22529	127.5
-.01962	3.36082	2.15984	123.7
-.02074	3.25898	2.09440	120.0
-.02204	3.15713	2.02895	116.2
-.02176	3.05529	1.96350	112.5
-.01996	2.95345	1.89805	108.7
-.01874	2.85160	1.83260	105.0
-.01970	2.74976	1.76715	101.2
-.02175	2.64792	1.70170	97.5
-.02217	2.54608	1.63625	93.7
-.01996	2.44423	1.57080	90.0
-.01743	2.34239	1.50535	86.2
-.01754	2.24055	1.43990	82.5
-.02011	2.13870	1.37445	78.7
-.02156	2.03686	1.30900	75.0
-.01915	1.93502	1.24355	71.2
-.01466	1.83317	1.17810	67.5
-.01268	1.73133	1.11265	63.7
-.01487	1.62949	1.04720	60.0
-.01728	1.52765	.98175	56.2
-.01460	1.42580	.91630	52.5
-.00684	1.32396	.85085	48.7
-.00011	1.22212	.78540	45.0
.00057	1.12027	.71995	41.2
-.00168	1.01843	.65450	37.5
.00217	.91659	.58905	33.7
.01652	.81474	.52360	30.0
.03446	.71290	.45815	26.2
.04435	.61106	.39270	22.5
.04453	.50922	.32725	18.7
.04942	.40737	.26180	15.0
.07739	.30553	.19635	11.2
.13006	.20369	.13090	7.5
.18422	.10184	.06545	3.7
.20733	.00000	.00000	.0

0733 -.02217

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

/d=.7500 HEIGHT=2.3873E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.03350	.00000	3.14159	180.00
-.03351	.00000	3.07614	176.25
-.03351	.00002	3.01069	172.50
-.03349	.00003	2.94524	168.75
-.03346	.00002	2.87979	165.00
-.03348	-.00002	2.81434	161.25
-.03353	-.00001	2.74889	157.50
-.03354	.00006	2.68344	153.75
-.03348	.00012	2.61799	150.00
-.03340	.00009	2.55254	146.25
-.03340	.00002	2.48709	142.50
-.03349	.00001	2.42164	138.75
-.03354	.00013	2.35619	135.00
-.03346	.00027	2.29074	131.25
-.03330	.00030	2.22529	127.50
-.03323	.00021	2.15984	123.75
-.03331	.00019	2.09440	120.00
-.03340	.00036	2.02895	116.25
-.03330	.00065	1.96350	112.50
-.03303	.00085	1.89805	108.75
-.03279	.00086	1.83260	105.00
-.03277	.00090	1.76715	101.25
-.03282	.00123	1.70170	97.50
-.03265	.00184	1.63625	93.75
-.03216	.00248	1.57080	90.00
-.03156	.00293	1.50535	86.25
-.03115	.00336	1.43990	82.50
-.03086	.00421	1.37445	78.75
-.03027	.00566	1.30900	75.00
-.02917	.00749	1.24355	71.25
-.02766	.00939	1.17810	67.50
-.02608	.01133	1.11265	63.75
-.02443	.01390	1.04720	60.00
-.02214	.01766	.98175	56.25
-.01891	.02270	.91630	52.50
-.01470	.02876	.85085	48.75
-.00954	.03526	.78540	45.00
-.00324	.04239	.71995	41.25
.00509	.05126	.65450	37.50
.01586	.06292	.58905	33.75
.02921	.07803	.52360	30.00
.04646	.09407	.45815	26.25
.06746	.10641	.39270	22.50
.09221	.11620	.32725	18.75
.12419	.12905	.26180	15.00
.17136	.15619	.19635	11.25
.26923	.21029	.13090	7.50
.48957	.22563	.06545	3.75
.67074	.00000	.00000	.00

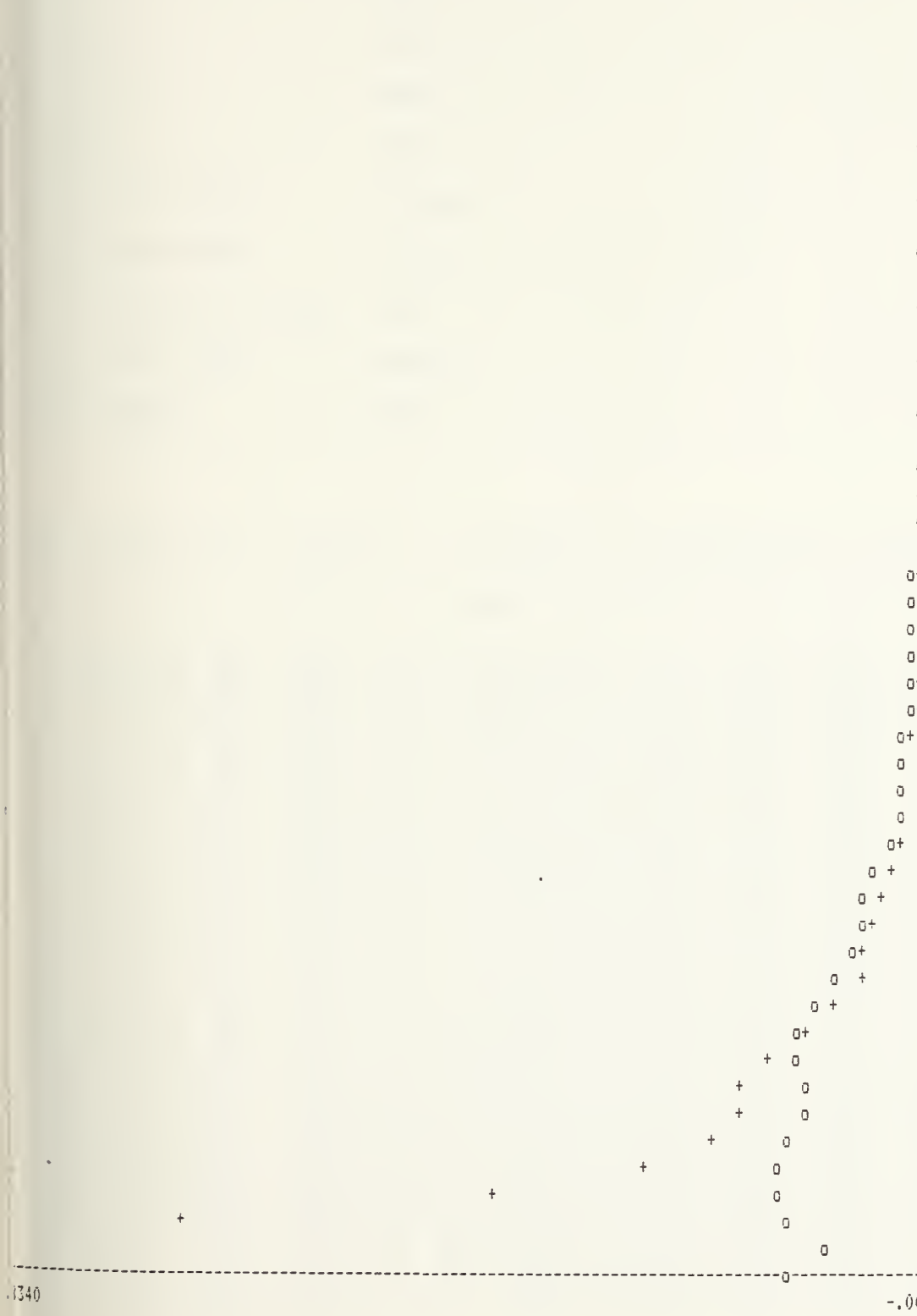
'074

-.03354

CASE 4D, 18 TERMS

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

/d=.7500 HEIGHT=2.3873E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax	Ay	DIST.	ANGLE
‡1/G	‡1/G	‡K	DEGREES
.00000	-.00004	3.14159	180.00
-.00010	.00010	3.07614	176.25
.00010	.00024	3.01069	172.50
.00033	.00000	2.94524	168.75
.00010	-.00036	2.87979	165.00
-.00042	-.00020	2.81434	161.25
-.00045	.00046	2.74889	157.50
.00026	.00080	2.68344	153.75
.00091	.00021	2.61799	150.00
.00054	-.00070	2.55254	146.25
-.00058	-.00062	2.48709	142.50
-.00096	.00062	2.42164	138.75
.00011	.00159	2.35619	135.00
.00151	.00102	2.29074	131.25
.00147	-.00052	2.22529	127.50
-.00017	-.00096	2.15984	123.75
-.00130	.00072	2.09440	120.00
-.00018	.00274	2.02895	116.25
.00217	.00282	1.96350	112.50
.00312	.00091	1.89805	108.75
.00139	-.00033	1.83260	105.00
-.00071	.00158	1.76715	101.25
.00013	.00515	1.70170	97.50
.00360	.00688	1.63625	93.75
.00639	.00555	1.57080	90.00
.00560	.00376	1.50535	86.25
.00282	.00597	1.43990	82.50
.00335	.01210	1.37445	78.75
.00857	.01738	1.30900	75.00
.01477	.01889	1.24355	71.25
.01720	.01834	1.17810	67.50
.01539	.02200	1.11265	63.75
.01679	.03307	1.04720	60.00
.02640	.04576	.98175	56.25
.04045	.05461	.91630	52.50
.05206	.05920	.85085	48.75
.05661	.06591	.78540	45.00
.06279	.08380	.71995	41.25
.08428	.10667	.65450	37.50
.11873	.12312	.58905	33.75
.15725	.12806	.52360	30.00
.18357	.11809	.45815	26.25
.18757	.11598	.39270	22.50
.21331	.13754	.32725	18.75
.29181	.14788	.26180	15.00
.44868	.14655	.19635	11.25
.77328	.13474	.13090	7.50
.98340	.10055	.06545	3.75
.00000	.13727	.00000	.00

DEPTH: FINITE, HEIGHT/DEPTH= .7500

WAVE HEIGHT 2.387324E-03,DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .0000

SOLUTION OF ORDER 22 NON-DIMENSIONALIZED BY WAVE NUMBER, 4 HEIGHT STEP(S).

WATER DEPTH	.30603
WAVE HEIGHT	.22952
WAVE PERIOD	9.8052
WAVE SPEED	.64080
MEAN EULERIAN FLUID SPEED	6.77109E-22
MEAN MASS TRANSPORT SPEED	1.33337E-02
MEAN FLUID SPEED RELATIVE TO WAVE	.64080
VOLUME FLUX DUE TO WAVES	4.08049E-03
BERNOULLI CONSTANT	.20695

SOLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .7500, WAVE HEIGHT=2.38732E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.20686	.62710	.00000	.00000	-.06235	.00000	.3932513	.0000000	.2016924	.0000000	.0000000	.0000000	.0000000	.0000000
.18549	.54154	.00000	.00000	-.34872	.01654	.2932663	.0000000	.1441445	.0000000	.0073355	.0000000	.0036953	.0000000
.16411	.47495	.00000	.00000	-.45734	.02908	.2255797	.0000000	.1060549	.0000000	.0128794	.0000000	.0063687	.0000000
.14274	.42229	.00000	.00000	-.48047	.04033	.1783252	.0000000	.0800276	.0000000	.0171952	.0000000	.0083570	.0000000
.12137	.37999	.00000	.00000	-.46410	.05156	.1443895	.0000000	.0617126	.0000000	.0206434	.0000000	.0098715	.0000000
.10000	.34553	.00000	.00000	-.43102	.06335	.1193880	.0000000	.0484755	.0000000	.0234619	.0000000	.0110489	.0000000
.07863	.31709	.00000	.00000	-.39237	.07592	.1005436	.0000000	.0386754	.0000000	.0258119	.0000000	.0119801	.0000000
.05726	.29335	.00000	.00000	-.35344	.08932	.0860519	.0000000	.0312620	.0000000	.0278057	.0000000	.0127274	.0000000
.03589	.27333	.00000	.00000	-.31653	.10354	.0747108	.0000000	.0255453	.0000000	.0295234	.0000000	.0133344	.0000000
.01452	.25632	.00000	.00000	-.28252	.11851	.0657012	.0000000	.0210607	.0000000	.0310237	.0000000	.0138324	.0000000
-.00685	.24177	.00000	.00000	-.25155	.13418	.0584525	.0000000	.0174879	.0000000	.0323503	.0000000	.0142443	.0000000
-.02822	.22926	.00000	.00000	-.22349	.15048	.0525590	.0000000	.0146015	.0000000	.0335365	.0000000	.0145871	.0000000
-.04959	.21847	.00000	.00000	-.19803	.16735	.0477272	.0000000	.0122393	.0000000	.0346081	.0000000	.0148739	.0000000
-.07096	.20914	.00000	.00000	-.17486	.18474	.0437410	.0000000	.0102823	.0000000	.0355854	.0000000	.0151146	.0000000
-.09233	.20109	.00000	.00000	-.15366	.20260	.0404387	.0000000	.0086418	.0000000	.0364849	.0000000	.0153168	.0000000
-.11370	.19416	.00000	.00000	-.13416	.22090	.0376983	.0000000	.0072506	.0000000	.0373198	.0000000	.0154866	.0000000
-.13507	.18822	.00000	.00000	-.11608	.23960	.0354263	.0000000	.0060565	.0000000	.0381011	.0000000	.0156288	.0000000
-.15644	.18317	.00000	.00000	-.09920	.25867	.0335508	.0000000	.0050189	.0000000	.0388382	.0000000	.0157471	.0000000
-.17781	.17893	.00000	.00000	-.08332	.27809	.0320160	.0000000	.0041051	.0000000	.0395387	.0000000	.0158446	.0000000
-.19918	.17544	.00000	.00000	-.06826	.29785	.0307789	.0000000	.0032888	.0000000	.0402097	.0000000	.0159236	.0000000
-.22055	.17265	.00000	.00000	-.05386	.31791	.0298066	.0000000	.0025479	.0000000	.0408571	.0000000	.0159860	.0000000
-.24192	.17051	.00000	.00000	-.03996	.33828	.0290740	.0000000	.0018640	.0000000	.0414862	.0000000	.0160331	.0000000
-.26329	.16901	.00000	.00000	-.02644	.35894	.0285630	.0000000	.0012208	.0000000	.0421021	.0000000	.0160661	.0000000
-.28466	.16811	.00000	.00000	-.01316	.37989	.0282612	.0000000	.0006039	.0000000	.0427093	.0000000	.0160856	.0000000
-.30603	.16781	.00000	.00000	.00000	.40112	.0281614	.0000000	.0000000	.0000000	.0433121	.0000000	.0160920	.0000000

SOLUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .7500, WAVE HEIGHT=2.38732E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.07091	.14765	.13954	.29219	.08990	.00470	.0217999	.2921920	.0082173	.1101390	.0000000	.0000000	.0000000	.0000000
.05521	.14766	.13032	.28594	.06964	.02166	.0218032	.2859396	.0078761	.1032913	.0003424	.0045400	.0001264	.0016761
.03950	.14732	.12144	.27717	.05198	.03831	.0217036	.2771700	.0074992	.0957702	.0006841	.0089621	.0002471	.0032393
.02379	.14671	.11293	.26685	.03683	.05471	.0215232	.2668458	.0070998	.0880118	.0010235	.0132342	.0003618	.0046825
.00809	.14588	.10481	.25567	.02406	.07090	.0212814	.2556702	.0066849	.0803103	.0013597	.0173375	.0004700	.0060043
-.00762	.14490	.09709	.24415	.01345	.08689	.0209951	.2441523	.0062652	.0728578	.0016917	.0212625	.0005717	.0072071
-.02332	.14380	.08975	.23266	.00478	.10274	.0206784	.2326567	.0058459	.0657733	.0020189	.0250069	.0006668	.0082958
-.03903	.14263	.08279	.22144	-.00217	.11846	.0203432	.2214400	.0054316	.0591244	.0023411	.0285729	.0007554	.0092766
-.05474	.14142	.07618	.21068	-.00760	.13409	.0199993	.2106790	.0050257	.0529423	.0026579	.0319663	.0008375	.0101567
-.07044	.14019	.06990	.20049	-.01173	.14964	.0196546	.2004917	.0046304	.0472334	.0029693	.0351952	.0009133	.0109433
-.08615	.13898	.06393	.19095	-.01472	.16514	.0193157	.1909531	.0042472	.0419871	.0032753	.0382692	.0009830	.0116440
-.10185	.13780	.05825	.18211	-.01674	.18060	.0189876	.1821071	.0038768	.0371819	.0035761	.0411988	.0010468	.0122657
-.11756	.13665	.05282	.17398	-.01793	.19603	.0186745	.1739754	.0035196	.0327892	.0038718	.0439951	.0011049	.0128152
-.13326	.13557	.04763	.16656	-.01841	.21145	.0183795	.1665644	.0031753	.0287764	.0041628	.0466693	.0011575	.0132986
-.14897	.13456	.04266	.15987	-.01829	.22687	.0181053	.1598700	.0028436	.0251089	.0044493	.0492328	.0012048	.0137218
-.16468	.13362	.03787	.15388	-.01766	.24229	.0178536	.1538812	.0025236	.0217515	.0047317	.0516966	.0012469	.0140898
-.18038	.13276	.03326	.14858	-.01661	.25773	.0176259	.1485835	.0022146	.0186690	.0050103	.0540719	.0012841	.0144072
-.19609	.13200	.02879	.14396	-.01521	.27318	.0174233	.1439602	.0019155	.0158271	.0052856	.0563692	.0013165	.0146781
-.21179	.13133	.02444	.13999	-.01353	.28866	.0172466	.1399942	.0016252	.0131924	.0055578	.0585991	.0013443	.0149060
-.22750	.13075	.02021	.13667	-.01160	.30417	.0170964	.1366692	.0013426	.0107325	.0058275	.0607717	.0013677	.0150939
-.24321	.13028	.01606	.13397	-.00949	.31971	.0169731	.1339705	.0010663	.0084165	.0060951	.0628970	.0013866	.0152442
-.25891	.12991	.01198	.13189	-.00724	.33528	.0168769	.1318853	.0007952	.0062141	.0063609	.0649847	.0014012	.0153591
-.27462	.12965	.00796	.13040	-.00488	.35089	.0168081	.1304034	.0005280	.0040962	.0066254	.0670445	.0014116	.0154401
-.29032	.12949	.00397	.12952	-.00246	.36654	.0167668	.1295173	.0002633	.0020342	.0068891	.0690856	.0014178	.0154882
-.30603	.12943	.00000	.12922	.00000	.38223	.0167530	.1292224	.0000000	.0000000	.0071523	.0711175	.0014199	.0155042

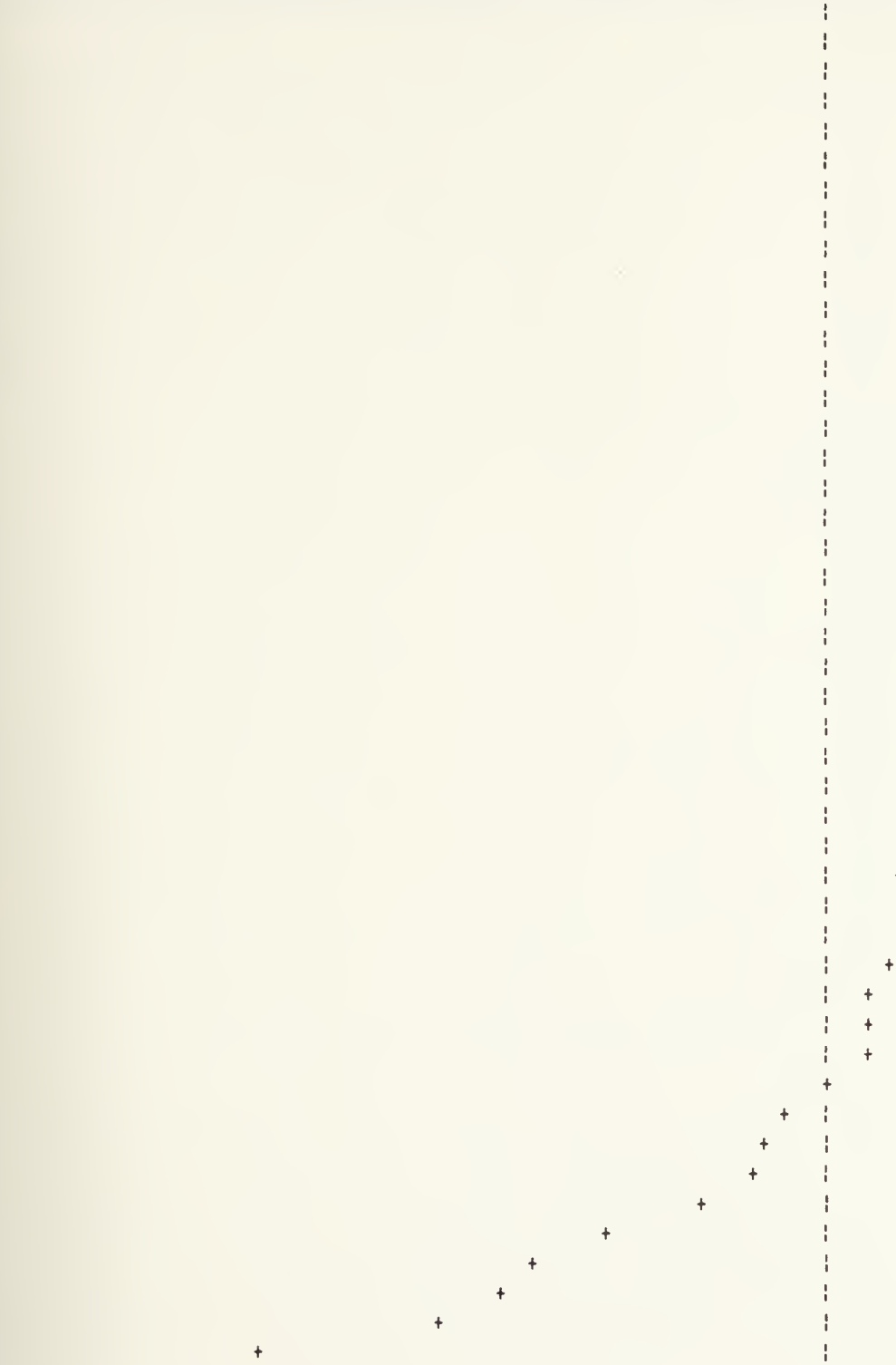
LUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .7500, WAVE HEIGHT=2.38732E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.01611	.03669	.08500	.15959	.13498	.00475	.0013458	.1595907	.0004335	.0514097	.0000000	.0000000	.0000000	.0000000
.00268	.03904	.08112	.15998	.12449	.01992	.0015239	.1599793	.0004704	.0493876	.0000193	.0021447	.0000061	.0006765
-.01074	.04120	.07726	.15994	.11480	.03494	.0016975	.1599426	.0005012	.0472295	.0000409	.0042917	.0000126	.0013249
-.02416	.04319	.07343	.15958	.10582	.04984	.0018654	.1595785	.0005258	.0449800	.0000648	.0064361	.0000195	.0019437
-.03758	.04502	.06963	.15896	.09747	.06463	.0020268	.1589640	.0005441	.0426732	.0000909	.0085739	.0000267	.0025320
-.05101	.04670	.06586	.15816	.08969	.07931	.0021809	.1581603	.0005562	.0403345	.0001191	.0107021	.0000340	.0030890
-.06443	.04824	.06212	.15722	.08240	.09388	.0023274	.1572169	.0005623	.0379837	.0001494	.0128187	.0000416	.0036146
-.07785	.04966	.05843	.15617	.07558	.10837	.0024658	.1561743	.0005627	.0356336	.0001816	.0149219	.0000491	.0041087
-.09127	.05095	.05476	.15507	.06918	.12276	.0025960	.1550663	.0005575	.0333015	.0002155	.0170106	.0000566	.0045714
-.10469	.05213	.05114	.15392	.06316	.13707	.0027177	.1539213	.0005472	.0309896	.0002512	.0190843	.0000640	.0050028
-.11812	.05321	.04755	.15276	.05748	.15130	.0028309	.1527634	.0005320	.0287061	.0002884	.0211425	.0000713	.0054034
-.13154	.05418	.04399	.15161	.05213	.16546	.0029356	.1516132	.0005122	.0264549	.0003271	.0231852	.0000783	.0057736
-.14496	.05506	.04047	.15049	.04706	.17955	.0030319	.1504887	.0004883	.0242388	.0003672	.0252127	.0000850	.0061139
-.15838	.05586	.03698	.14941	.04225	.19357	.0031198	.1494052	.0004606	.0220589	.0004085	.0272253	.0000914	.0064246
-.17181	.05656	.03352	.14838	.03768	.20753	.0031994	.1483764	.0004294	.0199155	.0004509	.0292238	.0000973	.0067063
-.18523	.05719	.03009	.14741	.03332	.22143	.0032710	.1474138	.0003951	.0178077	.0004943	.0312088	.0001029	.0069594
-.19865	.05774	.02668	.14653	.02915	.23527	.0033345	.1465276	.0003581	.0157339	.0005386	.0331815	.0001079	.0071845
-.21207	.05822	.02329	.14573	.02515	.24905	.0033901	.1457264	.0003185	.0136919	.0005838	.0351429	.0001125	.0073820
-.22550	.05863	.01993	.14502	.02129	.26279	.0034381	.1450179	.0002769	.0116788	.0006296	.0370941	.0001165	.0075523
-.23892	.05898	.01659	.14441	.01756	.27647	.0034784	.1444082	.0002334	.0096914	.0006760	.0390365	.0001199	.0076957
-.25234	.05926	.01324	.14390	.01393	.29010	.0035112	.1439024	.0001885	.0077260	.0007229	.0409714	.0001227	.0078126
-.26576	.05947	.00992	.14350	.01037	.30369	.0035366	.1435049	.0001424	.0057785	.0007702	.0429002	.0001249	.0079032
-.27918	.05962	.00661	.14322	.00688	.31723	.0035547	.1432187	.0000954	.0038446	.0008178	.0448244	.0001265	.0079678
-.29261	.05971	.00330	.14305	.00343	.33072	.0035656	.1430461	.0000479	.0019200	.0008656	.0467456	.0001275	.0080065
-.30603	.05974	.00000	.14299	.00000	.34416	.0035692	.1429884	.0000000	.0000000	.0009135	.0486652	.0001278	.0080194

WATER SURFACE ELEVATION

d=.7500 HEIGHT=2.3873E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

ELEV.VS. *K	TIME (K*6)^.5	DIST. *K	ANGLE DEGREES
-.02267	4.90260	3.14159	180.00
-.02271	4.80046	3.07614	176.25
-.02269	4.69832	3.01069	172.50
-.02254	4.59618	2.94524	168.75
-.02257	4.49405	2.87979	165.00
-.02284	4.39191	2.81434	161.25
-.02285	4.28977	2.74889	157.50
-.02246	4.18763	2.68344	153.75
-.02233	4.08550	2.61799	150.00
-.02280	3.98336	2.55254	146.25
-.02309	3.88122	2.48709	142.50
-.02256	3.77909	2.42164	138.75
-.02204	3.67695	2.35619	135.00
-.02252	3.57481	2.29074	131.25
-.02323	3.47267	2.22529	127.50
-.02283	3.37054	2.15984	123.75
-.02183	3.26840	2.09440	120.00
-.02195	3.16626	2.02895	116.25
-.02307	3.06412	1.96350	112.50
-.02314	2.96199	1.89805	108.75
-.02174	2.85985	1.83260	105.00
-.02111	2.75771	1.76715	101.25
-.02234	2.65557	1.70170	97.50
-.02313	2.55344	1.63625	93.75
-.02162	2.45130	1.57080	90.00
-.01989	2.34916	1.50535	86.25
-.02058	2.24702	1.43990	82.50
-.02209	2.14489	1.37445	78.75
-.02086	2.04275	1.30900	75.00
-.01772	1.94061	1.24355	71.25
-.01687	1.83847	1.17810	67.50
-.01852	1.73634	1.11265	63.75
-.01777	1.63420	1.04720	60.00
-.01289	1.53206	.98175	56.25
-.00888	1.42992	.91630	52.50
-.00906	1.32779	.85085	48.75
-.00834	1.22565	.78540	45.00
-.00100	1.12351	.71995	41.25
.00895	1.02137	.65450	37.50
.01370	.91924	.58905	33.75
.01611	.81710	.52360	30.00
.02730	.71496	.45815	26.25
.04799	.61282	.39270	22.50
.06442	.51069	.32725	18.75
.07091	.40855	.26180	15.00
.08530	.30641	.19635	11.25
.12667	.20427	.13090	7.50
.18104	.10214	.06545	3.75
.20686	.00000	.00000	.00



)686 -.02323

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

d=.7500 HEIGHT=2.3873E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.03686	.00000	3.14159	180.00
-.03687	.00000	3.07614	176.25
-.03686	.00001	3.01069	172.50
-.03686	.00002	2.94524	168.75
-.03686	.00001	2.87979	165.00
-.03686	.00002	2.81434	161.25
-.03686	.00004	2.74889	157.50
-.03684	.00005	2.68344	153.75
-.03683	.00005	2.61799	150.00
-.03684	.00006	2.55254	146.25
-.03684	.00010	2.48709	142.50
-.03680	.00014	2.42164	138.75
-.03676	.00015	2.35619	135.00
-.03676	.00016	2.29074	131.25
-.03676	.00023	2.22529	127.50
-.03670	.00033	2.15984	123.75
-.03662	.00040	2.09440	120.00
-.03656	.00046	2.02895	116.25
-.03653	.00059	1.96350	112.50
-.03643	.00081	1.89805	108.75
-.03626	.00103	1.83260	105.00
-.03608	.00125	1.76715	101.25
-.03592	.00156	1.70170	97.50
-.03569	.00203	1.63625	93.75
-.03532	.00263	1.57080	90.00
-.03486	.00328	1.50535	86.25
-.03436	.00407	1.43990	82.50
-.03372	.00518	1.37445	78.75
-.03284	.00665	1.30900	75.00
-.03172	.00842	1.24355	71.25
-.03034	.01050	1.17810	67.50
-.02857	.01314	1.11265	63.75
-.02628	.01661	1.04720	60.00
-.02346	.02102	.98175	56.25
-.01987	.02620	.91630	52.50
-.01507	.03225	.85085	48.75
-.00885	.03976	.78540	45.00
-.00142	.04942	.71995	41.25
.00786	.06085	.65450	37.50
.02037	.07263	.58905	33.75
.03669	.08500	.52360	30.00
.05633	.10053	.45815	26.25
.08075	.11928	.39270	22.50
.11172	.13350	.32725	18.75
.14765	.13954	.26180	15.00
.19290	.14759	.19635	11.25
.27099	.17484	.13090	7.50
.45064	.19361	.06545	3.75
.62710	.00000	.00000	.00

2710

-.03687

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

=.7500 HEIGHT=2.3873E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

Ax *1/G	Ay *1/G	DIST. *K	ANGLE DEGREES
.00000	.00003	3.14159	180.00
-.00001	.00007	3.07614	176.25
.00006	.00008	3.01069	172.50
.00006	-.00001	2.94524	168.75
-.00005	.00000	2.87979	165.00
-.00005	.00017	2.81434	161.25
.00015	.00022	2.74889	157.50
.00022	.00002	2.68344	153.75
-.00001	-.00005	2.61799	150.00
-.00012	.00026	2.55254	146.25
.00019	.00049	2.48709	142.50
.00047	.00027	2.42164	138.75
.00024	.00004	2.35619	135.00
-.00007	.00040	2.29074	131.25
.00024	.00095	2.22529	127.50
.00083	.00093	2.15984	123.75
.00081	.00056	2.09440	120.00
.00034	.00089	2.02895	116.25
.00054	.00187	1.96350	112.50
.00149	.00238	1.89805	108.75
.00201	.00217	1.83260	105.00
.00163	.00250	1.76715	101.25
.00172	.00408	1.70170	97.50
.00311	.00567	1.63625	93.75
.00481	.00632	1.57080	90.00
.00497	.00713	1.50535	86.25
.00530	.00978	1.43990	82.50
.00753	.01344	1.37445	78.75
.01086	.01641	1.30900	75.00
.01327	.01916	1.24355	71.25
.01511	.02415	1.17810	67.50
.01953	.03173	1.11265	63.75
.02681	.03954	1.04720	60.00
.03426	.04706	.98175	56.25
.04088	.05665	.91630	52.50
.05102	.07020	.85085	48.75
.06747	.08475	.78540	45.00
.08700	.09826	.71995	41.25
.10606	.11074	.65450	37.50
.12751	.12419	.58905	33.75
.15959	.13498	.52360	30.00
.20166	.13807	.45815	26.25
.24565	.12663	.39270	22.50
.28839	.10229	.32725	18.75
.29219	.08990	.26180	15.00
.37152	.07360	.19635	11.25
.58012	.05162	.13090	7.50
.83733	-.01902	.06545	3.75
.00000	-.06235	.00000	.00

-.06235

H: FINITE, HEIGHT/DEPTH= .7500

HEIGHT 2.387324E-03,DIMENSIONLESS WITH RESPECT TO PERIOD

RENT CRITERION: EULER , MAGNITUDE= .00

UTION, NON-DIMENSIONALIZED BY WAVENUMBER

ER DEPTH	.30618
E HEIGHT	.22963
E PERIOD	9.8075
E SPEED	.64065
N EULERIAN FLUID SPEED	2.80462E-22
N MASS TRANSPORT SPEED	1.33974E-02
N FLUID SPEED RELATIVE TO WAVE	.64065
UME FLUX DUE TO WAVES	4.10194E-03
NOULLI CONSTANT	.20691

TION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .7500, WAVE HEIGHT=2.38732E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.20675	.62285	.00000	.00000	-.08110	.00000	.3879366	.0000000	.1989822	.0000000	.0000000	.0000000	.0000000	.0000000
.18538	.53748	.00000	.00000	-.36032	.01621	.2888809	.0000000	.1420001	.0000000	.0072324	.0000000	.0036437	.0000000
.16400	.47146	.00000	.00000	-.46128	.02859	.2222729	.0000000	.1045084	.0000000	.0126946	.0000000	.0062779	.0000000
.14263	.41948	.00000	.00000	-.47898	.03982	.1759669	.0000000	.0789755	.0000000	.0169501	.0000000	.0082386	.0000000
.12126	.37787	.00000	.00000	-.45948	.05112	.1427851	.0000000	.0610316	.0000000	.0203563	.0000000	.0097347	.0000000
.09989	.34403	.00000	.00000	-.42497	.06303	.1183538	.0000000	.0480594	.0000000	.0231468	.0000000	.0109004	.0000000
.07852	.31612	.00000	.00000	-.38598	.07573	.0999293	.0000000	.0384421	.0000000	.0254794	.0000000	.0118248	.0000000
.05715	.29282	.00000	.00000	-.34731	.08927	.0857414	.0000000	.0311517	.0000000	.0274634	.0000000	.0125684	.0000000
.03577	.27316	.00000	.00000	-.31098	.10361	.0746178	.0000000	.0255155	.0000000	.0291770	.0000000	.0131740	.0000000
.01440	.25644	.00000	.00000	-.27765	.11870	.0657623	.0000000	.0210819	.0000000	.0306771	.0000000	.0136719	.0000000
-.00697	.24212	.00000	.00000	-.24739	.13446	.0586217	.0000000	.0175400	.0000000	.0320063	.0000000	.0140846	.0000000
-.02834	.22979	.00000	.00000	-.21998	.15085	.0528034	.0000000	.0146706	.0000000	.0331969	.0000000	.0144288	.0000000
-.04971	.21914	.00000	.00000	-.19511	.16779	.0480232	.0000000	.0123161	.0000000	.0342744	.0000000	.0147172	.0000000
-.07109	.20993	.00000	.00000	-.17245	.18523	.0440718	.0000000	.0103609	.0000000	.0352585	.0000000	.0149595	.0000000
-.09246	.20197	.00000	.00000	-.15169	.20315	.0407926	.0000000	.0087181	.0000000	.0361653	.0000000	.0151634	.0000000
-.11383	.19511	.00000	.00000	-.13255	.22148	.0380670	.0000000	.0073221	.0000000	.0370080	.0000000	.0153348	.0000000
-.13520	.18922	.00000	.00000	-.11478	.24021	.0358040	.0000000	.0061216	.0000000	.0377974	.0000000	.0154785	.0000000
-.15657	.18421	.00000	.00000	-.09816	.25931	.0339336	.0000000	.0050766	.0000000	.0385426	.0000000	.0155981	.0000000
-.17794	.18000	.00000	.00000	-.08250	.27876	.0324014	.0000000	.0041549	.0000000	.0392515	.0000000	.0156968	.0000000
-.19932	.17654	.00000	.00000	-.06762	.29852	.0311654	.0000000	.0033303	.0000000	.0399307	.0000000	.0157768	.0000000
-.22069	.17376	.00000	.00000	-.05337	.31860	.0301932	.0000000	.0025811	.0000000	.0405864	.0000000	.0158399	.0000000
-.24206	.17164	.00000	.00000	-.03962	.33898	.0294603	.0000000	.0018889	.0000000	.0412239	.0000000	.0158877	.0000000
-.26343	.17014	.00000	.00000	-.02622	.35965	.0289488	.0000000	.0012374	.0000000	.0418480	.0000000	.0159211	.0000000
-.28480	.16925	.00000	.00000	-.01305	.38060	.0286467	.0000000	.0006122	.0000000	.0424635	.0000000	.0159409	.0000000
-.30618	.16896	.00000	.00000	.00000	.40184	.0285467	.0000000	.0000000	.0000000	.0430746	.0000000	.0159474	.0000000

UTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .7500, WAVE HEIGHT=2.38732E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.07480	.15109	.14189	.29659	.08124	.00220	.0228287	.2965936	.0086973	.1129958	.0000000	.0000000	.0000000	.0000000
.05893	.15078	.13247	.28971	.06303	.01922	.0227360	.2897122	.0083010	.1057752	.0003616	.0046535	.0001349	.0017364
.04305	.15019	.12339	.28039	.04678	.03596	.0225562	.2803916	.0078773	.0979213	.0007211	.0091785	.0002633	.0033531
.02718	.14936	.11469	.26958	.03264	.05247	.0223075	.2695821	.0074364	.0898669	.0010772	.0135437	.0003849	.0048436
.01131	.14835	.10640	.25798	.02058	.06876	.0220069	.2579787	.0069868	.0819036	.0014289	.0177309	.0004993	.0062070
-.00457	.14720	.09852	.24608	.01050	.08488	.0216691	.2460840	.0065356	.0742209	.0017756	.0217317	.0006067	.0074462
-.02044	.14597	.09104	.23426	.00223	.10085	.0213070	.2342573	.0060881	.0669353	.0021167	.0255442	.0007069	.0085665
-.03632	.14468	.08395	.22275	-.00440	.11671	.0209315	.2227505	.0056486	.0601114	.0024520	.0291715	.0008000	.0095749
-.05219	.14336	.07722	.21174	-.00959	.13247	.0205516	.2117361	.0052198	.0537780	.0027812	.0326200	.0008863	.0104788
-.06806	.14204	.07083	.20133	-.01350	.14816	.0201747	.2013281	.0048038	.0479386	.0031045	.0358986	.0009658	.0112862
-.08394	.14074	.06477	.19160	-.01631	.16379	.0198069	.1915979	.0044018	.0425802	.0034218	.0390172	.0010389	.0120046
-.09981	.13947	.05899	.18259	-.01817	.17939	.0194530	.1825861	.0040144	.0376791	.0037334	.0419872	.0011057	.0126416
-.11569	.13826	.05348	.17431	-.01921	.19497	.0191168	.1743113	.0036415	.0332044	.0040395	.0448199	.0011665	.0132043
-.13156	.13712	.04822	.16678	-.01955	.21053	.0188013	.1667774	.0032830	.0291219	.0043405	.0475271	.0012214	.0136989
-.14743	.13605	.04317	.15998	-.01931	.22610	.0185088	.1599776	.0029381	.0253950	.0046366	.0501206	.0012708	.0141316
-.16331	.13506	.03832	.15390	-.01856	.24167	.0182411	.1538993	.0026060	.0219871	.0049283	.0526118	.0013148	.0145077
-.17918	.13416	.03364	.14853	-.01740	.25726	.0179994	.1485257	.0022858	.0188617	.0052160	.0550122	.0013536	.0148319
-.19506	.13336	.02912	.14384	-.01590	.27287	.0177847	.1438388	.0019762	.0159832	.0055000	.0573327	.0013875	.0151085
-.21093	.13266	.02472	.13982	-.01411	.28850	.0175977	.1398201	.0016761	.0133171	.0057808	.0595841	.0014165	.0153411
-.22681	.13206	.02044	.13645	-.01208	.30417	.0174389	.1364523	.0013841	.0108303	.0060589	.0617769	.0014408	.0155327
-.24268	.13156	.01624	.13372	-.00987	.31987	.0173087	.1337198	.0010990	.0084907	.0063347	.0639213	.0014605	.0156861
-.25855	.13118	.01212	.13161	-.00752	.33561	.0172072	.1316089	.0008194	.0062675	.0066086	.0660272	.0014757	.0158032
-.27443	.13090	.00805	.13011	-.00507	.35138	.0171346	.1301091	.0005440	.0041307	.0068812	.0681045	.0014865	.0158857
-.29030	.13073	.00402	.12921	-.00255	.36719	.0170911	.1292124	.0002713	.0020511	.0071529	.0701627	.0014930	.0159348
-.30618	.13068	.00000	.12891	.00000	.38305	.0170765	.1289140	.0000000	.0000000	.0074241	.0722115	.0014951	.0159511

UTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .7500, WAVE HEIGHT=2.38732E-03 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.01869	.03738	.08676	.16135	.13509	.00249	.0013973	.1613507	.0004539	.0524171	.0000000	.0000000	.0000000	.0000000
.00515	.03974	.08279	.16189	.12490	.01778	.0015795	.1618935	.0004918	.0504020	.0000201	.0021877	.0000064	.0006959
-.00838	.04192	.07884	.16194	.11539	.03295	.0017574	.1619382	.0005233	.0482239	.0000427	.0043794	.0000133	.0013634
-.02192	.04393	.07492	.16160	.10649	.04798	.0019297	.1616031	.0005485	.0459367	.0000677	.0065691	.0000205	.0020007
-.03546	.04578	.07103	.16098	.09816	.06290	.0020954	.1609802	.0005673	.0435806	.0000949	.0087524	.0000281	.0026065
-.04899	.04747	.06717	.16014	.09036	.07771	.0022538	.1601419	.0005796	.0411860	.0001244	.0109257	.0000358	.0031802
-.06253	.04903	.06335	.15915	.08304	.09242	.0024042	.1591460	.0005858	.0387757	.0001559	.0130867	.0000437	.0037214
-.07606	.05046	.05957	.15804	.07617	.10704	.0025465	.1580395	.0005860	.0363668	.0001894	.0152334	.0000517	.0042300
-.08960	.05177	.05582	.15686	.06970	.12156	.0026801	.1568606	.0005805	.0339723	.0002248	.0173646	.0000596	.0047060
-.10314	.05296	.05212	.15564	.06362	.13600	.0028051	.1556411	.0005695	.0316014	.0002619	.0194797	.0000673	.0051498
-.11667	.05405	.04845	.15441	.05788	.15036	.0029213	.1544079	.0005536	.0292609	.0003006	.0215781	.0000749	.0055617
-.13021	.05503	.04482	.15318	.05247	.16464	.0030287	.1531836	.0005330	.0269554	.0003409	.0236599	.0000823	.0059422
-.14374	.05592	.04123	.15199	.04735	.17885	.0031274	.1519875	.0005080	.0246877	.0003826	.0257253	.0000893	.0062917
-.15728	.05672	.03767	.15084	.04250	.19299	.0032175	.1508361	.0004791	.0224589	.0004255	.0277748	.0000960	.0066108
-.17082	.05744	.03414	.14974	.03788	.20707	.0032991	.1497437	.0004466	.0202693	.0004696	.0298091	.0001023	.0069000
-.18435	.05807	.03063	.14872	.03349	.22109	.0033723	.1487227	.0004108	.0181180	.0005148	.0318291	.0001081	.0071598
-.19789	.05863	.02716	.14778	.02929	.23505	.0034373	.1477834	.0003722	.0160032	.0005609	.0338359	.0001134	.0073907
-.21142	.05911	.02371	.14694	.02526	.24896	.0034942	.1469351	.0003311	.0139224	.0006078	.0358305	.0001181	.0075933
-.22496	.05953	.02028	.14619	.02138	.26281	.0035432	.1461853	.0002878	.0118726	.0006554	.0378144	.0001223	.0077679
-.23850	.05987	.01687	.14554	.01762	.27661	.0035844	.1455406	.0002426	.0098502	.0007037	.0397888	.0001259	.0079149
-.25203	.06015	.01348	.14501	.01397	.29036	.0036180	.1450060	.0001959	.0078512	.0007524	.0417552	.0001289	.0080347
-.26557	.06037	.01010	.14459	.01041	.30406	.0036439	.1445860	.0001480	.0058714	.0008015	.0437152	.0001312	.0081276
-.27910	.06052	.00673	.14428	.00690	.31771	.0036624	.1442837	.0000991	.0039061	.0008510	.0456702	.0001329	.0081937
-.29264	.06061	.00336	.14410	.00344	.33132	.0036735	.1441015	.0000497	.0019506	.0009006	.0476220	.0001339	.0082334
-.30618	.06064	.00000	.14404	.00000	.34488	.0036772	.1440406	.0000000	.0000000	.0009504	.0495722	.0001342	.0082466

CASE 4D, 23 TERMS

WATER SURFACE ELEVATION

/d=.7500 HEIGHT=2.3873E-03, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .00000, CRITER., EULER

ELEV.VS.	TIME	DIST.	ANGLE
*K	(K*G)^.5	*K	DEGREES
-.02288	4.90377	3.14159	180.00
-.02284	4.80161	3.07614	176.25
-.02287	4.69945	3.01069	172.50
-.02300	4.59729	2.94524	168.75
-.02292	4.49512	2.87979	165.00
-.02268	4.39296	2.81434	161.25
-.02278	4.29080	2.74889	157.50
-.02313	4.18864	2.68344	153.75
-.02303	4.08648	2.61799	150.00
-.02255	3.98432	2.55254	146.25
-.02260	3.88215	2.48709	142.50
-.02319	3.77999	2.42164	138.75
-.02319	3.67783	2.35619	135.00
-.02244	3.57567	2.29074	131.25
-.02231	3.47351	2.22529	127.50
-.02313	3.37134	2.15984	123.75
-.02335	3.26918	2.09440	120.00
-.02235	3.16702	2.02895	116.25
-.02187	3.06486	1.96350	112.50
-.02285	2.96270	1.89805	108.75
-.02340	2.86053	1.83260	105.00
-.02217	2.75837	1.76715	101.25
-.02115	2.65621	1.70170	97.50
-.02213	2.55405	1.63625	93.75
-.02307	2.45189	1.57080	90.00
-.02163	2.34972	1.50535	86.25
-.01978	2.24756	1.43990	82.50
-.02043	2.14540	1.37445	78.75
-.02170	2.04324	1.30900	75.00
-.01996	1.94108	1.24355	71.25
-.01676	1.83891	1.17810	67.50
-.01642	1.73675	1.11265	63.75
-.01768	1.63459	1.04720	60.00
-.01524	1.53243	.98175	56.25
-.00962	1.43027	.91630	52.50
-.00686	1.32811	.85085	48.75
-.00708	1.22594	.78540	45.00
-.00284	1.12378	.71995	41.25
.00751	1.02162	.65450	37.50
.01569	.91946	.58905	33.75
.01869	.81730	.52360	30.00
.02681	.71513	.45815	26.25
.04642	.61297	.39270	22.50
.06599	.51081	.32725	18.75
.07480	.40865	.26180	15.00
.08722	.30649	.19635	11.25
.12580	.20432	.13090	7.50
.18014	.10216	.06545	3.75
.20675	.00000	.00000	.00

9C. DEEP WATER

4 DIMENSIONAL. FACTORS

5. SAMPLE SCREEN INPUT & DISPLAY

6. COMP. W/ DEAN'S SOL'N

TH: FINITE, HEIGHT/DEPTH= .2520

E HEIGHT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

RRENT CRITERION: EULER , MAGNITUDE= .00

UTION OF ORDER 9 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

TER DEPTH	2.7919
VE HEIGHT	.70349
VE PERIOD	5.9232
VE SPEED	1.0608
AN EULERIAN FLUID SPEED.	-2.09812E-22
AN MASS TRANSPORT SPEED	1.99771E-02
AN FLUID SPEED RELATIVE TO WAVE	1.0608
LUME FLUX DUE TO WAVES	5.57735E-02
RNOULLI CONSTANT	.56301

UTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.43013	.54527	.00000	.00000	-.32057	.00000	.2973223	.0000000	.9579718	.0000000	.0000000	.0000000	.0000000	.0000000
.29588	.46879	.00000	.00000	-.30872	.09190	.2197603	.0000000	.6785645	.0000000	.0347091	.0000000	.1098524	.0000000
.16163	.40437	.00000	.00000	-.28947	.18594	.1635144	.0000000	.4829395	.0000000	.0604364	.0000000	.1878183	.0000000
.02738	.34973	.00000	.00000	-.26678	.28282	.1223085	.0000000	.3448179	.0000000	.0796223	.0000000	.2433815	.0000000
-.10687	.30313	.00000	.00000	-.24295	.38285	.0918867	.0000000	.2467157	.0000000	.0940001	.0000000	.2830882	.0000000
-.24112	.26323	.00000	.00000	-.21932	.48608	.0692917	.0000000	.1767456	.0000000	.1048192	.0000000	.3115130	.0000000
-.37537	.22898	.00000	.00000	-.19666	.59242	.0524299	.0000000	.1266968	.0000000	.1129898	.0000000	.3318815	.0000000
-.50962	.19950	.00000	.00000	-.17538	.70172	.0397987	.0000000	.0908305	.0000000	.1191806	.0000000	.3464831	.0000000
-.64387	.17409	.00000	.00000	-.15569	.81376	.0303072	.0000000	.0650998	.0000000	.1238865	.0000000	.3569499	.0000000
-.77812	.15217	.00000	.00000	-.13766	.92834	.0231569	.0000000	.0466322	.0000000	.1274753	.0000000	.3644499	.0000000
-.91237	.13326	.00000	.00000	-.12125	1.04523	.0177592	.0000000	.0333784	.0000000	.1302217	.0000000	.3698206	.0000000
-1.04662	.11695	.00000	.00000	-.10639	1.16422	.0136777	.0000000	.0238709	.0000000	.1323319	.0000000	.3736634	.0000000
-1.18087	.10289	.00000	.00000	-.09297	1.28510	.0105873	.0000000	.0170561	.0000000	.1339607	.0000000	.3764107	.0000000
-1.31512	.09080	.00000	.00000	-.08088	1.40769	.0082452	.0000000	.0121761	.0000000	.1352249	.0000000	.3783729	.0000000
-1.44937	.08043	.00000	.00000	-.06998	1.53183	.0064693	.0000000	.0086850	.0000000	.1362126	.0000000	.3797732	.0000000
-1.58362	.07157	.00000	.00000	-.06014	1.65736	.0051229	.0000000	.0061897	.0000000	.1369907	.0000000	.3807716	.0000000
-1.71787	.06406	.00000	.00000	-.05123	1.78414	.0041031	.0000000	.0044067	.0000000	.1376100	.0000000	.3814829	.0000000
-1.85212	.05773	.00000	.00000	-.04314	1.91206	.0033325	.0000000	.0031317	.0000000	.1381091	.0000000	.3819889	.0000000
-1.98637	.05247	.00000	.00000	-.03574	2.04103	.0027531	.0000000	.0022176	.0000000	.1385176	.0000000	.3823480	.0000000
-2.12062	.04818	.00000	.00000	-.02893	2.17094	.0023213	.0000000	.0015581	.0000000	.1388582	.0000000	.3826015	.0000000
-2.25487	.04478	.00000	.00000	-.02258	2.30174	.0020048	.0000000	.0010766	.0000000	.1391486	.0000000	.3827783	.0000000
-2.38912	.04219	.00000	.00000	-.01662	2.43336	.0017802	.0000000	.0007170	.0000000	.1394027	.0000000	.3828987	.0000000
-2.52337	.04038	.00000	.00000	-.01093	2.56576	.0016306	.0000000	.0004378	.0000000	.1396316	.0000000	.3829762	.0000000
-2.65762	.03931	.00000	.00000	-.00542	2.69892	.0015451	.0000000	.0002074	.0000000	.1398448	.0000000	.3830195	.0000000
-2.79187	.03895	.00000	.00000	.00000	2.83280	.0015173	.0000000	.0000000	.0000000	.1400504	.0000000	.3830335	.0000000

LUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

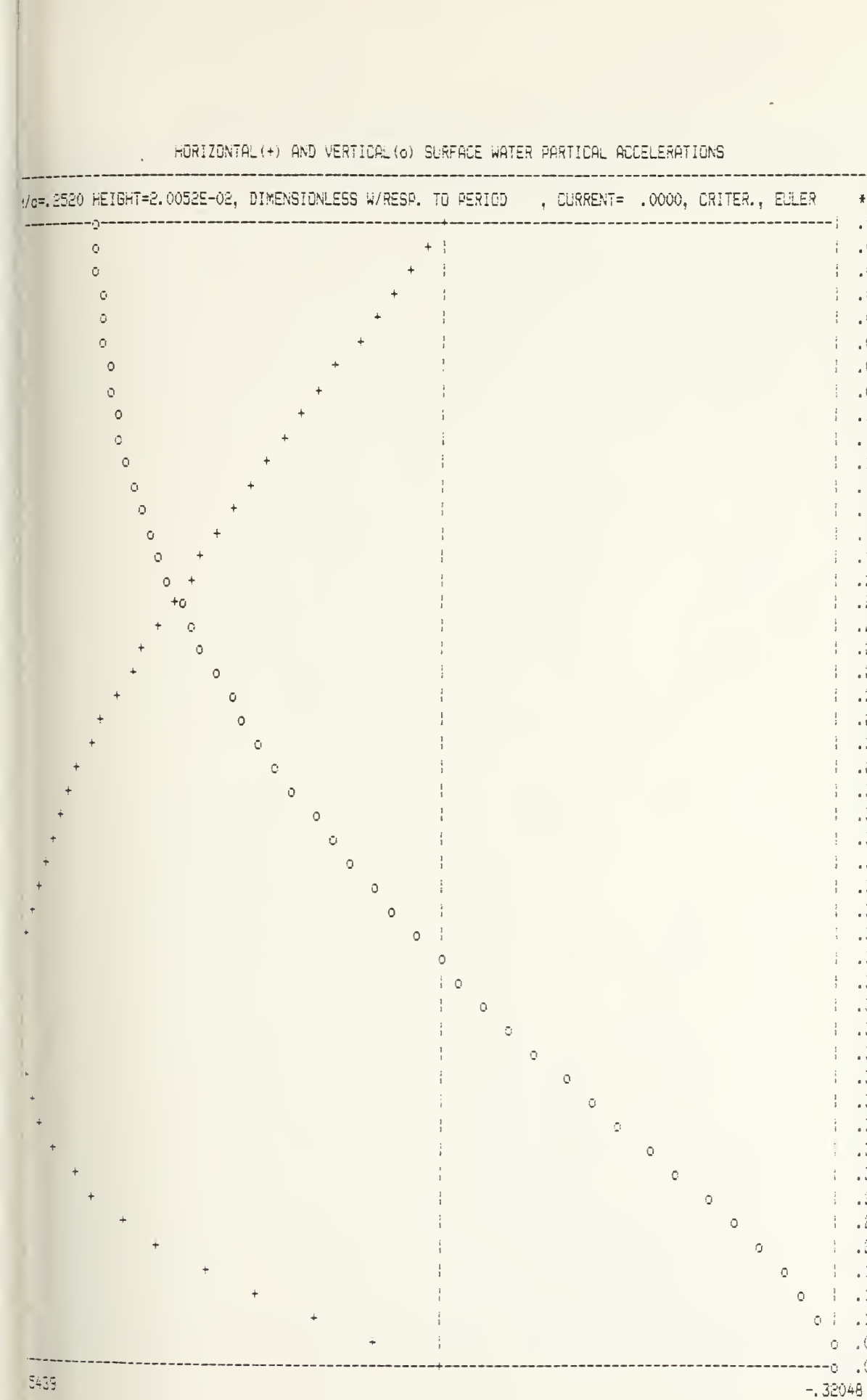
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.39238	.49619	.15078	.19253	-.27901	-.00012	.2462004	.1925264	.7839628	.6130514	.0000000	.0000000	.0000000	.0000000
.25970	.42926	.12748	.15902	-.27364	.09577	.1842624	.1590161	.5622895	.4852485	.0285562	.0233208	.0893083	.0728595
.12703	.37215	.10847	.13257	-.25985	.19299	.1384922	.1325678	.4042439	.3869510	.0499673	.0426640	.1534266	.1307199
-.00565	.32322	.09275	.11139	-.24173	.29236	.1044719	.1113873	.2910811	.3103490	.0660852	.0588476	.1995534	.1769777
-.13833	.28118	.07959	.09421	-.22174	.39428	.0790629	.0942074	.2097964	.2499829	.0782606	.0724864	.2327809	.2141493
-.27101	.24497	.06849	.08012	-.20134	.49889	.0600097	.0801201	.1512761	.2019717	.0874864	.0840511	.2567339	.2441312
-.40368	.21372	.05906	.06846	-.18141	.60618	.0456750	.0684635	.1090804	.1635034	.0944974	.0939079	.2740055	.2683763
-.53636	.18671	.05100	.05875	-.16245	.71606	.0348605	.0587456	.0786282	.1325012	.0998400	.1023467	.2864578	.2880128
-.66904	.16335	.04409	.05059	-.14473	.82838	.0266829	.0505947	.0566433	.1074039	.1039227	.1096002	.2954315	.3039277
-.80171	.14313	.03812	.04372	-.12836	.94295	.0204872	.0437249	.0407728	.0870192	.1070519	.1158572	.3018939	.3168254
-.93439	.12564	.03296	.03791	-.11338	1.05961	.0157857	.0379135	.0293215	.0704234	.1094582	.1212730	.3065439	.3272699
-1.06707	.11051	.02847	.03298	-.09973	1.17816	.0122132	.0329847	.0210654	.0568920	.1113156	.1259762	.3098865	.3357158
-1.19974	.09745	.02456	.02880	-.08736	1.29844	.0094960	.0287982	.0151189	.0458502	.1127557	.1300748	.3122869	.3425316
-1.33242	.08619	.02113	.02524	-.07615	1.42028	.0074279	.0252410	.0108407	.0368378	.1138784	.1336597	.3140090	.3480170
-1.46510	.07651	.01812	.02222	-.06601	1.54354	.0058535	.0222216	.0077662	.0294829	.1147595	.1368083	.3152434	.3524166
-1.59777	.06823	.01545	.01967	-.05683	1.66808	.0046551	.0196655	.0055586	.0234824	.1154566	.1395870	.3161273	.3559303
-1.73045	.06119	.01308	.01751	-.04849	1.79378	.0037442	.0175117	.0039741	.0185872	.1160138	.1420533	.3167597	.3587211
-1.86313	.05526	.01096	.01571	-.04088	1.92053	.0030535	.0157105	.0028359	.0145909	.1164648	.1442572	.3172115	.3609221
-1.99581	.05032	.00904	.01422	-.03391	2.04826	.0025324	.0142212	.0020160	.0113210	.1168353	.1462428	.3175333	.3626410
-2.12848	.04629	.00729	.01301	-.02747	2.17687	.0021430	.0130112	.0014217	.0086314	.1171455	.1480494	.3177614	.3639646
-2.26116	.04309	.00568	.01205	-.02147	2.30630	.0018569	.0120542	.0009855	.0063973	.1174109	.1497122	.3179211	.3649616
-2.39384	.04066	.00417	.01133	-.01580	2.43651	.0016533	.0113300	.0006581	.0045097	.1176437	.1512634	.3180301	.3656852
-2.52651	.03896	.00274	.01082	-.01040	2.56745	.0015176	.0108232	.0004027	.0028720	.1178541	.1527330	.3181005	.3661749
-2.65919	.03795	.00136	.01052	-.00516	2.69910	.0014399	.0105232	.0001910	.0013962	.1180503	.1541491	.3181398	.3664580
-2.79187	.03761	.00000	.01042	.00000	2.83143	.0014146	.0104239	.0000000	.0000000	.1182396	.1555387	.3181525	.3665506

UTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30474	.38815	.25213	.30293	-.19197	.00026	.1506574	.3029337	.4665265	.9380660	.0000000	.0000000	.0000000	.0000000
.17571	.34003	.21653	.25744	-.19654	.10411	.1156212	.2574402	.3431152	.7639743	.0171783	.0361512	.0522321	.1098031
.04669	.29796	.18657	.21953	-.19253	.20796	.0887794	.2195251	.2520052	.6231339	.0303647	.0669215	.0906249	.1992890
-.08234	.26121	.16118	.18785	-.18342	.31269	.0682301	.1878522	.1848715	.5089911	.0404938	.0932024	.1188089	.2723254
-.21136	.22912	.13954	.16129	-.17145	.41880	.0524977	.1612947	.1354704	.4162217	.0482823	.1157268	.1394750	.3320133
-.34039	.20112	.12100	.13893	-.15810	.52656	.0404478	.1389339	.0991570	.3405934	.0542785	.1350953	.1546114	.3808374
-.46941	.17667	.10504	.12003	-.14430	.63608	.0312129	.1200304	.0724906	.2787650	.0589015	.1518018	.1656849	.4207938
-.59844	.15534	.09126	.10399	-.13066	.74737	.0241306	.1039911	.0529288	.2280970	.0624718	.1662540	.1737760	.4534928
-.72746	.13673	.07932	.09034	-.11752	.86039	.0186954	.0903392	.0385949	.1864965	.0652346	.1787907	.1796804	.4802393
-.85649	.12051	.06893	.07869	-.10512	.97506	.0145217	.0786898	.0281049	.1522945	.0673776	.1896952	.1839834	.5020956
-.98551	.10637	.05987	.06873	-.09354	1.09128	.0113148	.0687306	.0204386	.1241516	.0690443	.1992057	.1871151	.5199298
1.11454	.09407	.05194	.06021	-.08284	1.20893	.0088498	.0602065	.0148440	.1009861	.0703452	.2075238	.1893912	.5344541
1.24356	.08339	.04498	.05291	-.07299	1.32791	.0069545	.0529087	.0107676	.0819186	.0713648	.2148211	.1910435	.5462537
1.37259	.07414	.03884	.04666	-.06398	1.44811	.0054971	.0466648	.0078019	.0662304	.0721681	.2212449	.1922415	.5558112
1.50161	.06616	.03341	.04133	-.05573	1.56942	.0043767	.0413328	.0056471	.0533297	.0728051	.2269218	.1931091	.5635243
1.63064	.05930	.02858	.03679	-.04818	1.69175	.0035162	.0367946	.0040831	.0427269	.0733143	.2319620	.1937368	.5697212
1.75967	.05344	.02427	.03295	-.04127	1.81501	.0028563	.0329529	.0029483	.0340140	.0737254	.2364616	.1941904	.5746720
1.88869	.04850	.02038	.02973	-.03492	1.93913	.0023520	.0297269	.0021242	.0268486	.0740614	.2405053	.1945177	.5785984
2.01772	.04437	.01685	.02705	-.02905	2.06403	.0019686	.0270503	.0015240	.0209410	.0743401	.2441681	.1947530	.5816814
2.14674	.04099	.01361	.02487	-.02359	2.18966	.0016801	.0248691	.0010839	.0160437	.0745755	.2475176	.1949213	.5840674
2.27577	.03830	.01062	.02314	-.01847	2.31598	.0014668	.0231398	.0007570	.0119425	.0747785	.2506147	.1950400	.5858728
2.40479	.03625	.00781	.02183	-.01362	2.44294	.0013143	.0218284	.0005087	.0084492	.0749579	.2535157	.1951217	.5871883
2.53382	.03482	.00513	.02091	-.00897	2.57051	.0012122	.0209094	.0003128	.0053957	.0751209	.2562729	.1951747	.5880815
2.66284	.03396	.00254	.02036	-.00445	2.69867	.0011536	.0203649	.0001488	.0026276	.0752735	.2589356	.1952045	.5885991
2.79187	.03368	.00000	.02018	.00000	2.82740	.0011345	.0201846	.0000000	.0000000	.0754211	.2615515	.1952141	.5887686

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

/o=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



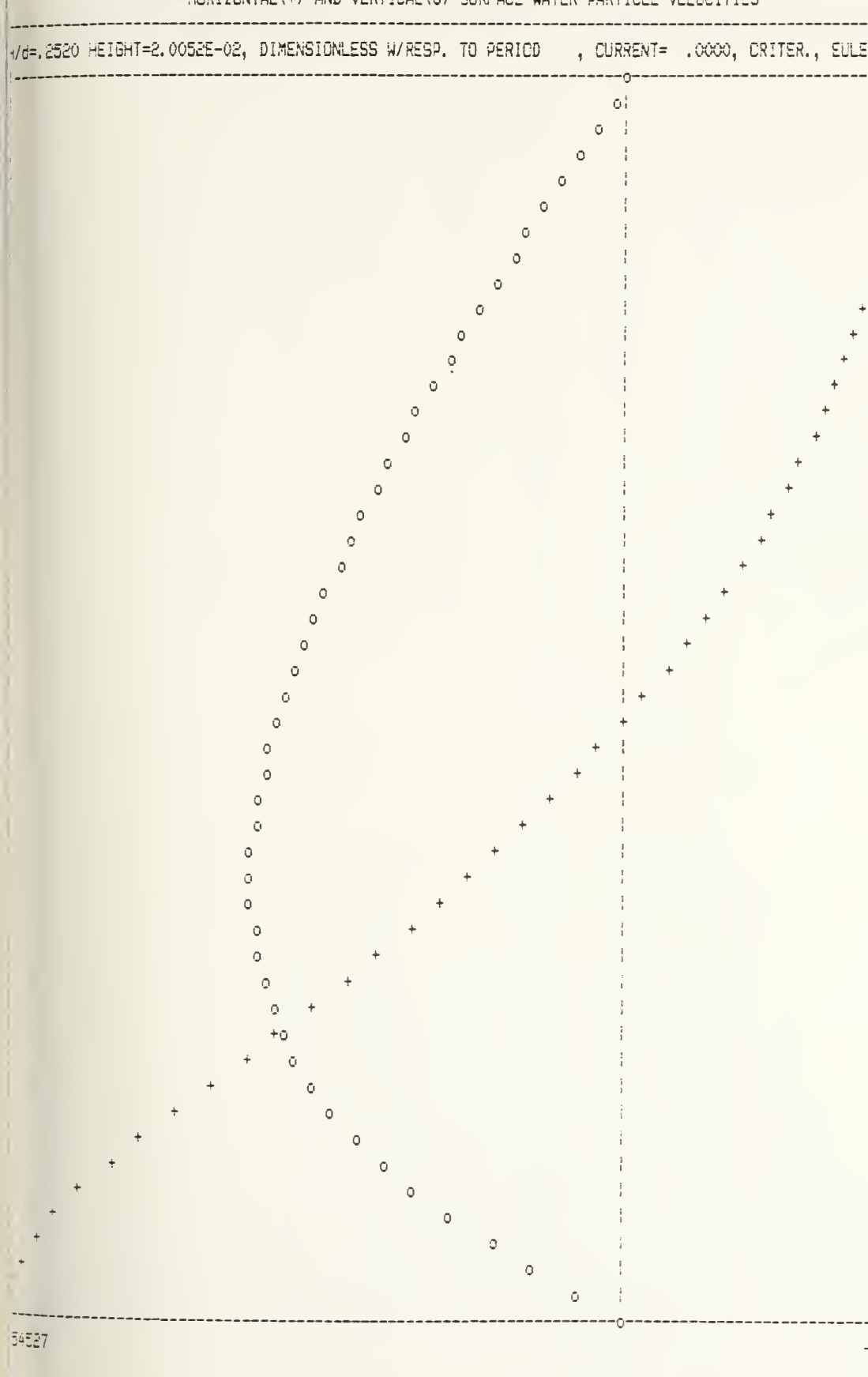
Ax *1/G	Ay *1/G	DIST. *K	ANGLE DEGREES
.00000	.28506	3.14159	180.00
.01433	.28480	3.07614	176.25
.02865	.28400	3.01069	172.50
.04294	.28266	2.94524	168.75
.05720	.28078	2.87979	165.00
.07140	.27834	2.81434	161.25
.08553	.27535	2.74889	157.50
.09958	.27179	2.68344	153.75
.11353	.26767	2.61799	150.00
.12736	.26298	2.55254	146.25
.14106	.25773	2.48709	142.50
.15462	.25191	2.42164	138.75
.16802	.24553	2.35619	135.00
.18124	.23857	2.29074	131.25
.19427	.23102	2.22529	127.50
.20706	.22266	2.15984	123.75
.21960	.21407	2.09440	120.00
.23184	.20465	2.02895	116.25
.24375	.19456	1.96350	112.50
.25529	.18380	1.89805	108.75
.26643	.17238	1.83260	105.00
.27714	.16029	1.76715	101.25
.28738	.14754	1.70170	97.50
.29713	.13414	1.63625	93.75
.30637	.12010	1.57080	90.00
.31504	.10542	1.50535	86.25
.32311	.09009	1.43990	82.50
.33050	.07410	1.37445	78.75
.33711	.05744	1.30900	75.00
.34285	.04009	1.24355	71.25
.34759	.02204	1.17810	67.50
.35119	.00329	1.11265	63.75
.35351	-.01616	1.04720	60.00
.35439	-.03628	.98175	56.25
.35368	-.05704	.91630	52.50
.35121	-.07840	.85085	48.75
.34676	-.10031	.78540	45.00
.34009	-.12271	.71995	41.25
.33087	-.14553	.65450	37.50
.31867	-.16866	.58905	33.75
.30298	-.19193	.52360	30.00
.28316	-.21509	.45815	26.25
.25855	-.23776	.39270	22.50
.22853	-.25936	.32725	18.75
.19270	-.27912	.26180	15.00
.15104	-.29610	.19635	11.25
.10411	-.30925	.13090	7.50
.05316	-.31761	.05545	3.75
.00000	-.32048	.00000	.00

5439

-.32048

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

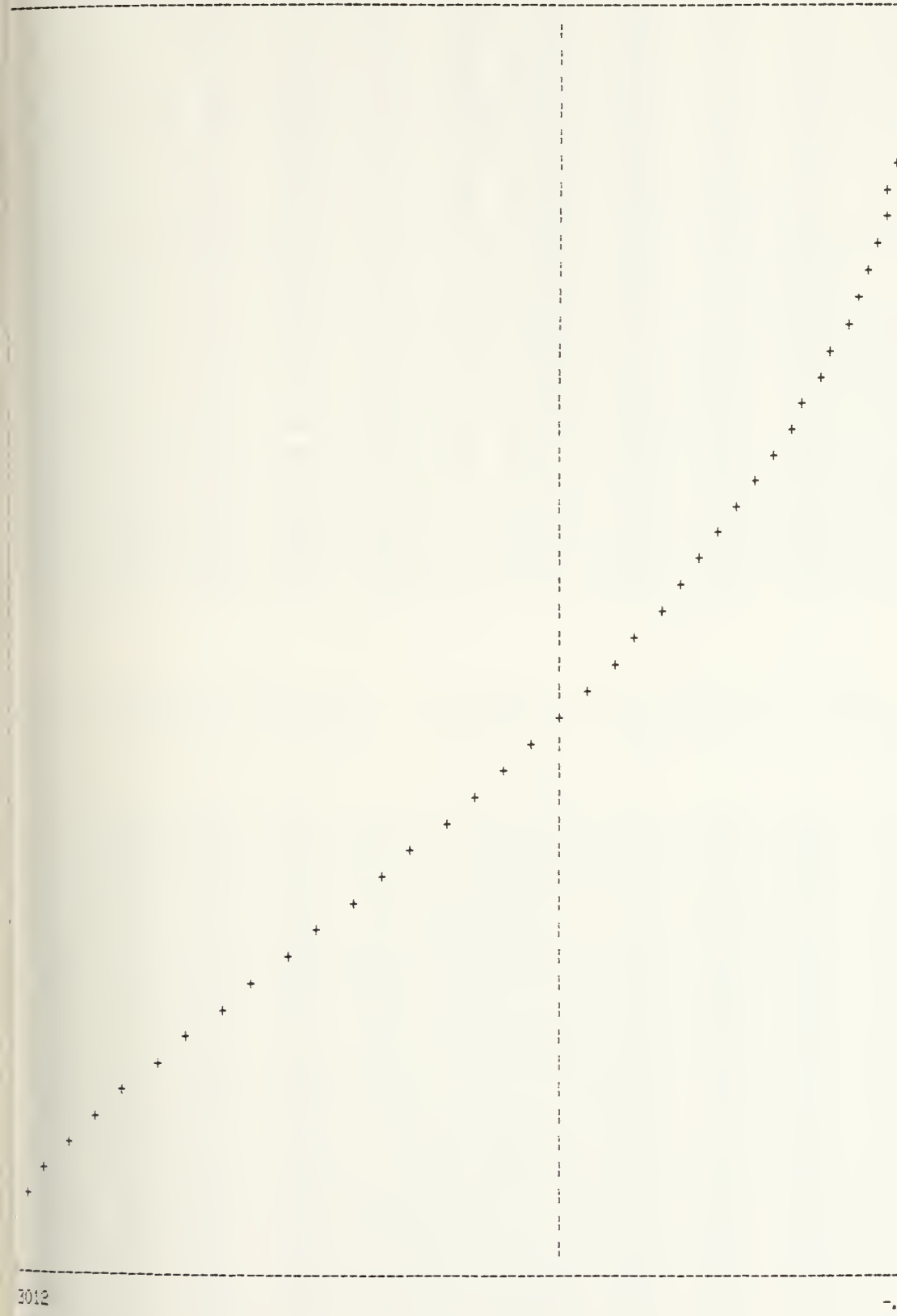
1/d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.23255	.00000	3.14159	180.00
-.23219	.01442	3.07614	176.25
-.23111	.02883	3.01069	172.50
-.22930	.04319	2.94524	168.75
-.22676	.05750	2.87979	165.00
-.22349	.07173	2.81434	161.25
-.21948	.08586	2.74889	157.50
-.21472	.09987	2.68344	153.75
-.20922	.11373	2.61799	150.00
-.20298	.12743	2.55254	146.25
-.19600	.14095	2.48709	142.50
-.18827	.15426	2.42164	138.75
-.17980	.16735	2.35619	135.00
-.17057	.18018	2.29074	131.25
-.16058	.19274	2.22529	127.50
-.14980	.20499	2.15984	123.75
-.13823	.21689	2.09440	120.00
-.12586	.22840	2.02895	116.25
-.11266	.23947	1.96350	112.50
-.09865	.25006	1.89805	108.75
-.08381	.26013	1.83260	105.00
-.06813	.26964	1.76715	101.25
-.05163	.27856	1.70170	97.50
-.03429	.28686	1.63625	93.75
-.01609	.29450	1.57080	90.00
.00296	.30143	1.50535	86.25
.02289	.30760	1.43990	82.50
.04372	.31292	1.37445	78.75
.06545	.31732	1.30900	75.00
.08809	.32068	1.24355	71.25
.11163	.32288	1.17810	67.50
.13605	.32379	1.11265	63.75
.16133	.32329	1.04720	60.00
.18742	.32125	.98175	56.25
.21430	.31755	.91630	52.50
.24191	.31206	.85085	48.75
.27021	.30464	.78540	45.00
.29911	.29515	.71995	41.25
.32852	.28339	.65450	37.50
.35825	.26912	.58905	33.75
.38803	.25208	.52360	30.00
.41743	.23198	.45815	26.25
.44587	.20853	.39270	22.50
.47257	.18153	.32725	18.75
.49658	.15091	.26180	15.00
.51683	.11684	.19635	11.25
.53227	.07978	.13090	7.50
.54196	.04048	.06545	3.75
.54527	.00000	.00000	.00

WATER SURFACE ELEVATION

/d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



ELEV.VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.27336	2.96157	3.14159	180.00
-.27298	2.89987	3.07614	176.25
-.27186	2.83817	3.01069	172.50
-.27000	2.77647	2.94524	168.75
-.26742	2.71477	2.87979	165.00
-.26413	2.65307	2.81434	161.25
-.26015	2.59137	2.74889	157.50
-.25546	2.52967	2.68344	153.75
-.25006	2.46797	2.61799	150.00
-.24391	2.40628	2.55254	146.25
-.23700	2.34458	2.48709	142.50
-.22931	2.28288	2.42164	138.75
-.22080	2.22118	2.35619	135.00
-.21149	2.15948	2.29074	131.25
-.20138	2.09778	2.22529	127.50
-.19050	2.03608	2.15984	123.75
-.17890	1.97438	2.09440	120.00
-.16660	1.91268	2.02895	116.25
-.15363	1.85098	1.96350	112.50
-.14001	1.78928	1.89805	108.75
-.12571	1.72758	1.83260	105.00
-.11071	1.66588	1.76715	101.25
-.09496	1.60418	1.70170	97.50
-.07839	1.54248	1.63625	93.75
-.06096	1.48078	1.57080	90.00
-.04263	1.41909	1.50535	86.25
-.02342	1.35739	1.43990	82.50
-.00334	1.29569	1.37445	78.75
.01753	1.23399	1.30900	75.00
.03911	1.17229	1.24355	71.25
.06128	1.11059	1.17810	67.50
.08396	1.04889	1.11265	63.75
.10706	.98719	1.04720	60.00
.13056	.92549	.98175	56.25
.15444	.86379	.91630	52.50
.17871	.80209	.85085	48.75
.20338	.74039	.78540	45.00
.22842	.67869	.71995	41.25
.25376	.61699	.65450	37.50
.27921	.55529	.58905	33.75
.30447	.49359	.52360	30.00
.32909	.43190	.45815	26.25
.35250	.37020	.39270	22.50
.37406	.30850	.32725	18.75
.39302	.24680	.26180	15.00
.40869	.18510	.19635	11.25
.42041	.12340	.13090	7.50
.42767	.06170	.06545	3.75
.43012	.00000	.00000	.00

3012 -.27336

OLUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.39302	.49658	.15091	.19270	-.27912	-.00058	.2465879	.1927004	.7853517	.6137269	.0000000	.0000000	.0000000	.0000000
.26032	.42956	.12759	.15917	-.27374	.09532	.1843251	.1591746	.5632025	.4858285	.0285050	.0233475	.0894787	.0729572
.12762	.37239	.10856	.13270	-.25994	.19255	.1386748	.1326957	.4048568	.3874009	.0500499	.0427135	.1537110	.1308974
-.00508	.32342	.09281	.11149	-.24183	.29192	.1046003	.1114861	.2914967	.3106858	.0651915	.0589154	.1999151	.1772185
-.13779	.28134	.07964	.09428	-.22183	.39385	.0791539	.0942829	.2100794	.2502326	.0783839	.0725685	.2331955	.2144344
-.27049	.24510	.06853	.08018	-.20142	.49847	.0600744	.0801779	.1514691	.2021573	.0876219	.0841442	.2571848	.2444511
-.40319	.21382	.05909	.06851	-.18148	.60578	.0457211	.0685079	.1092120	.1636420	.0946416	.0940097	.2744814	.2687225
-.53590	.18680	.05103	.05878	-.16252	.71567	.0348933	.0587801	.0787178	.1326052	.0999905	.1024555	.2869508	.2883790
-.66860	.16342	.04411	.05062	-.14479	.82800	.0267062	.0506216	.0567041	.1074823	.1040778	.1097145	.2959263	.3043091
-.80130	.14319	.03814	.04375	-.12841	.94259	.0205038	.0437459	.0408138	.0870784	.1072102	.1159759	.3024067	.3172186
-.93401	.12569	.03297	.03793	-.11342	1.05926	.0157974	.0379300	.0293492	.0704681	.1096189	.1213952	.3070622	.3276720
-1.06671	.11055	.02848	.03300	-.09977	1.17783	.0122216	.0329976	.0210839	.0569256	.1114780	.1261014	.3104085	.3361248
-1.19941	.09748	.02457	.02881	-.08739	1.29813	.0095019	.0288083	.0151312	.0458754	.1129194	.1302023	.3128114	.3429458
-1.33212	.08621	.02114	.02525	-.07617	1.41999	.0074320	.0252489	.0108488	.0368556	.1140429	.1337891	.3145352	.3484352
-1.46482	.07653	.01812	.02223	-.06603	1.54327	.0058563	.0222277	.0077715	.0294969	.1149246	.1369392	.3157707	.3528378
-1.59752	.06824	.01545	.01967	-.05684	1.66783	.0046571	.0196701	.0055621	.0234926	.1156222	.1397192	.3166554	.3563538
-1.73023	.06120	.01308	.01752	-.04850	1.79356	.0037455	.0175152	.0039763	.0185946	.1161798	.1421865	.3172883	.3591463
-1.86293	.05527	.01096	.01571	-.04089	1.92033	.0030544	.0157130	.0028373	.0145962	.1166309	.1443913	.3177404	.3613485
-1.99563	.05033	.00904	.01422	-.03392	2.04808	.0025330	.0142231	.0020168	.0113247	.1170017	.1463776	.3180625	.3630685
-2.12834	.04630	.00729	.01301	-.02748	2.17672	.0021434	.0130125	.0014222	.0086340	.1173120	.1481847	.3182907	.3643928
-2.26104	.04309	.00568	.01206	-.02147	2.30618	.0018571	.0120551	.0009858	.0063990	.1175774	.1498480	.3184504	.3653902
-2.39374	.04066	.00417	.01133	-.01581	2.43641	.0016535	.0113305	.0006583	.0045108	.1178103	.1513997	.3185595	.3661141
-2.52644	.03896	.00274	.01082	-.01040	2.56737	.0015177	.0108235	.0004028	.0028726	.1180207	.1528656	.3186299	.3666040
-2.65915	.03795	.00136	.01052	-.00516	2.69905	.0014399	.0105234	.0001911	.0013965	.1182170	.1542860	.3186693	.3668873
-2.79185	.03761	.00000	.01042	.00000	2.83141	.0014146	.0104241	.0000000	.0000000	.1184064	.1556759	.3186820	.3669799

OLUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30447	.38803	.25208	.30298	-.19193	.00046	.1505679	.3029755	.4662062	.9381085	.0000000	.0000000	.0000000	.0000000
.17545	.33994	.21649	.25743	-.19650	.10430	.1155565	.2574255	.3428913	.7638599	.0171668	.0361498	.0521921	.1097822
.04644	.29788	.18653	.21949	-.19250	.20815	.0887327	.2194944	.2518493	.6229892	.0303448	.0669141	.0905569	.1992492
-.08257	.26114	.16115	.18782	-.18339	.31288	.0681964	.1878198	.1847631	.5088561	.0404678	.0931885	.1187212	.2722607
-.21159	.22907	.13951	.16127	-.17142	.41898	.0524733	.1612652	.1353950	.4161069	.0482518	.1157068	.1393736	.3319270
-.34060	.20107	.12097	.13891	-.15807	.52673	.0404302	.1389084	.0991046	.3404995	.0542446	.1350700	.1545003	.3807331
-.46961	.17664	.10502	.12001	-.14428	.63624	.0312002	.1200090	.0724543	.2786895	.0588653	.1517719	.1655670	.4206749
-.59863	.15531	.09124	.10397	-.13064	.74752	.0241214	.1039734	.0529037	.2280371	.0624339	.1662203	.1738535	.4533621
-.72764	.13671	.07930	.09032	-.11751	.86053	.0186888	.0903247	.0385777	.1864493	.0651954	.1787538	.1795546	.4800992
-.85665	.12049	.06892	.07868	-.10510	.97520	.0145169	.0786780	.0280932	.1522577	.0673374	.1896556	.1838553	.5019481
-.98567	.10636	.05986	.06872	-.09353	1.09141	.0113114	.0687211	.0204206	.1241230	.0690035	.1991638	.1869854	.5197765
-1.11468	.09406	.05193	.06020	-.08283	1.20905	.0088474	.0601989	.0148386	.1009640	.0703039	.2074800	.1892605	.5342961
-1.24369	.08338	.04497	.05290	-.07299	1.32802	.0069528	.0529027	.0107640	.0819018	.0713231	.2147758	.1909121	.5460921
-1.37271	.07413	.03884	.04666	-.06397	1.44821	.0054959	.0466602	.0077995	.0662176	.0721261	.2211983	.1921095	.5556468
-1.50172	.06615	.03341	.04133	-.05572	1.56951	.0043759	.0413292	.0056455	.0533201	.0727629	.2268742	.1929768	.5633578
-1.63073	.05929	.02858	.03679	-.04818	1.69183	.0035156	.0367919	.0040821	.0427198	.0732720	.2319135	.1936043	.5695530
-1.75975	.05344	.02426	.03295	-.04127	1.81508	.0028560	.0329509	.0029477	.0340088	.0736830	.2364124	.1940578	.5745025
-1.88876	.04849	.02038	.02973	-.03491	1.93918	.0023517	.0297255	.0021238	.0268449	.0740189	.2404554	.1943849	.5784280
-2.01777	.04437	.01685	.02705	-.02905	2.06408	.0019684	.0270494	.0015237	.0209324	.0742976	.2441178	.1946202	.5815103
-2.14678	.04099	.01361	.02487	-.02359	2.18970	.0018800	.0248686	.0010837	.0160419	.0745330	.2474668	.1947884	.5838958
-2.27580	.03830	.01062	.02314	-.01847	2.31600	.0014668	.0231396	.0007569	.0119412	.0747360	.2505637	.1949071	.5857009
-2.40481	.03625	.00781	.02183	-.01362	2.44295	.0013143	.0218284	.0005087	.0084485	.0749154	.2534644	.1949688	.5870161
-2.53382	.03482	.00513	.02091	-.00897	2.57051	.0012122	.0209095	.0003128	.0053952	.0750783	.2562313	.1950418	.5879092
-2.66284	.03396	.00254	.02037	-.00445	2.69865	.0011536	.0203652	.0001488	.0026274	.0752309	.2588838	.1950715	.5884267
-2.79185	.03368	.00000	.02018	.00000	2.82738	.0011345	.0201849	.0000000	.0000000	.0753785	.2614995	.1950811	.5885961

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

DEPTH: FINITE, HEIGHT/DEPTH= .2520

WAVE HEIGHT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .00

SOLUTION OF ORDER 7 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

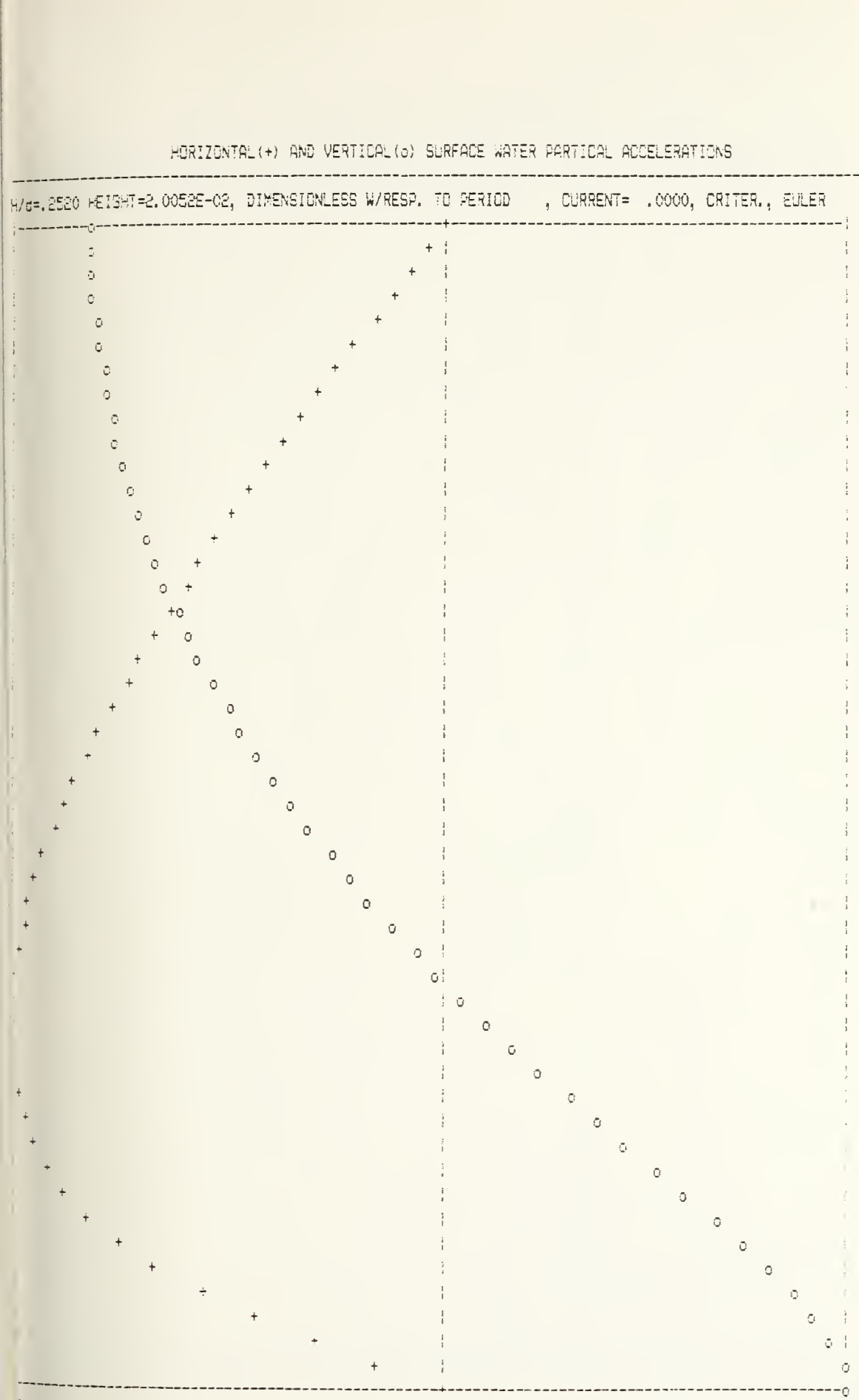
WATER DEPTH	2.7919
WAVE HEIGHT	.70348
WAVE PERIOD	5.9231
WAVE SPEED	1.0608
MEAN EULERIAN FLUID SPEED	-5.72746E-22
MEAN MASS TRANSPORT SPEED	1.99803E-02
MEAN FLUID SPEED RELATIVE TO WAVE	1.0608
VOLUME FLUX DUE TO WAVES	5.57819E-02
BERNOULLI CONSTANT	.56300

SOLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.43012	.54527	.00000	.00000	-.32048	.00000	.2973202	.0000000	.9573579	.0000000	.0000000	.0000000	.0000000	.0000000
.29587	.46880	.00000	.00000	-.30871	.09190	.2197690	.0000000	.6785863	.0000000	.0347093	.0000000	.1098521	.0000000
.16162	.40438	.00000	.00000	-.28948	.18594	.1635214	.0000000	.4829567	.0000000	.0204375	.0000000	.1378201	.0000000
.02738	.34973	.00000	.00000	-.26680	.28283	.1223127	.0000000	.3448274	.0000000	.0796240	.0000000	.2433847	.0000000
-.10687	.30313	.00000	.00000	-.24296	.38285	.0918891	.0000000	.2467202	.0000000	.0940021	.0000000	.2930320	.0000000
-.24112	.26324	.00000	.00000	-.21933	.48608	.0692929	.0000000	.1767475	.0000000	.1048214	.0000000	.3115170	.0000000
-.37537	.22898	.00000	.00000	-.19666	.59242	.0524306	.0000000	.1266975	.0000000	.1129930	.0000000	.3318856	.0000000
-.50962	.19950	.00000	.00000	-.17539	.70171	.0397990	.0000000	.0908306	.0000000	.1191929	.0000000	.3464870	.0000000
-.64387	.17409	.00000	.00000	-.15570	.81375	.0303074	.0000000	.0650997	.0000000	.1238887	.0000000	.3569538	.0000000
-.77812	.15217	.00000	.00000	-.13766	.92833	.0231570	.0000000	.0466321	.0000000	.1274775	.0000000	.3644537	.0000000
-.91237	.13326	.00000	.00000	-.12125	1.04522	.0177593	.0000000	.0333783	.0000000	.1302240	.0000000	.3698244	.0000000
-1.04662	.11695	.00000	.00000	-.10639	1.16420	.0136777	.0000000	.0238708	.0000000	.1323342	.0000000	.3736672	.0000000
-1.18086	.10289	.00000	.00000	-.09297	1.28509	.0105873	.0000000	.0170561	.0000000	.1339630	.0000000	.3764144	.0000000
-1.31511	.09080	.00000	.00000	-.08088	1.40768	.0082452	.0000000	.0121760	.0000000	.1352271	.0000000	.3783766	.0000000
-1.44936	.08043	.00000	.00000	-.06998	1.53182	.0064693	.0000000	.0086850	.0000000	.1362148	.0000000	.3797769	.0000000
-1.58361	.07157	.00000	.00000	-.06014	1.65734	.0051229	.0000000	.0061897	.0000000	.1369929	.0000000	.3807753	.0000000
-1.71786	.06406	.00000	.00000	-.05124	1.78412	.0041031	.0000000	.0044067	.0000000	.1376122	.0000000	.3814866	.0000000
-1.85211	.05773	.00000	.00000	-.04314	1.91205	.0033326	.0000000	.0031317	.0000000	.1381113	.0000000	.3819926	.0000000
-1.98636	.05247	.00000	.00000	-.03574	2.04101	.0027531	.0000000	.0022176	.0000000	.1385198	.0000000	.3823517	.0000000
-2.12061	.04818	.00000	.00000	-.02893	2.17092	.0023213	.0000000	.0015582	.0000000	.1388604	.0000000	.3826051	.0000000
-2.25486	.04478	.00000	.00000	-.02259	2.30172	.0020049	.0000000	.0010766	.0000000	.1391508	.0000000	.3827320	.0000000
-2.38910	.04219	.00000	.00000	-.01662	2.43334	.0017802	.0000000	.0007170	.0000000	.1394049	.0000000	.3829024	.0000000
-2.52335	.04038	.00000	.00000	-.01093	2.56574	.0016307	.0000000	.0004378	.0000000	.1396339	.0000000	.3829799	.0000000
-2.65760	.03931	.00000	.00000	-.00542	2.69889	.0015452	.0000000	.0002074	.0000000	.1398470	.0000000	.3830232	.0000000
-2.79185	.03895	.00000	.00000	.00000	2.83278	.0015173	.0000000	.0000000	.0000000	.1400526	.0000000	.3830371	.0000000

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

H/d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



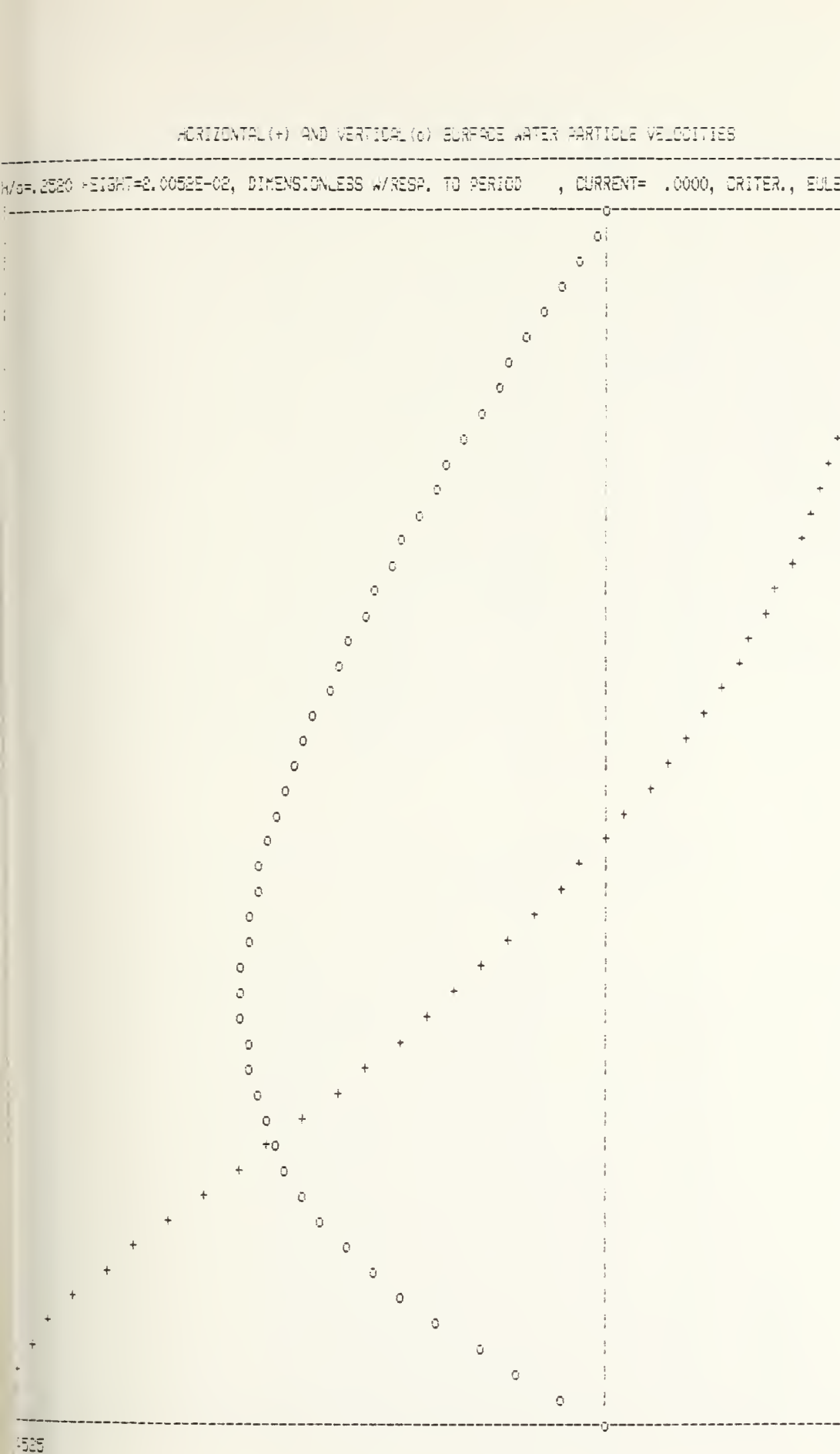
Ax *1/G	Ay *1/G	DIST. *K	ANGLE DEGREES
.00000	.28504	3.14159	180.00
.01433	.28477	3.07614	176.25
.02864	.28395	3.01069	172.50
.04293	.28258	2.94524	168.75
.05718	.28067	2.87979	165.00
.07138	.27823	2.81434	161.25
.08551	.27525	2.74889	157.50
.09956	.27174	2.68344	153.75
.11353	.26768	2.61799	150.00
.12739	.26307	2.55254	146.25
.14113	.25790	2.48709	142.50
.15471	.25213	2.42164	138.75
.16813	.24576	2.35619	135.00
.18134	.23876	2.29074	131.25
.19432	.23113	2.22529	127.50
.20705	.22287	2.15984	123.75
.21950	.21396	2.09440	120.00
.23165	.20442	2.02895	116.25
.24348	.19426	1.96350	112.50
.25498	.18347	1.89805	108.75
.26612	.17207	1.83260	105.00
.27689	.16006	1.76715	101.25
.28725	.14743	1.70170	97.50
.29717	.13417	1.63625	93.75
.30657	.12025	1.57080	90.00
.31541	.10567	1.50535	86.25
.32358	.09038	1.43990	82.50
.33099	.07439	1.37445	78.75
.33754	.05767	1.30900	75.00
.34313	.04024	1.24355	71.25
.34765	.02209	1.17810	67.50
.35095	.00325	1.11265	63.75
.35307	-.01626	1.04720	60.00
.35378	-.03639	.98175	56.25
.35299	-.05713	.91630	52.50
.35056	-.07843	.85085	48.75
.34627	-.10028	.78540	45.00
.33986	-.12262	.71995	41.25
.33093	-.14542	.65450	37.50
.31901	-.16856	.58905	33.75
.30351	-.19190	.52360	30.00
.28375	-.21516	.45815	26.25
.25907	-.23791	.39270	22.50
.22886	-.25957	.32725	18.75
.19279	-.27932	.26180	15.00
.15093	-.29620	.19635	11.25
.10392	-.30923	.13090	7.50
.05301	-.31747	.06545	3.75
.00000	-.32029	.00000	.00

.35378

-.32029

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

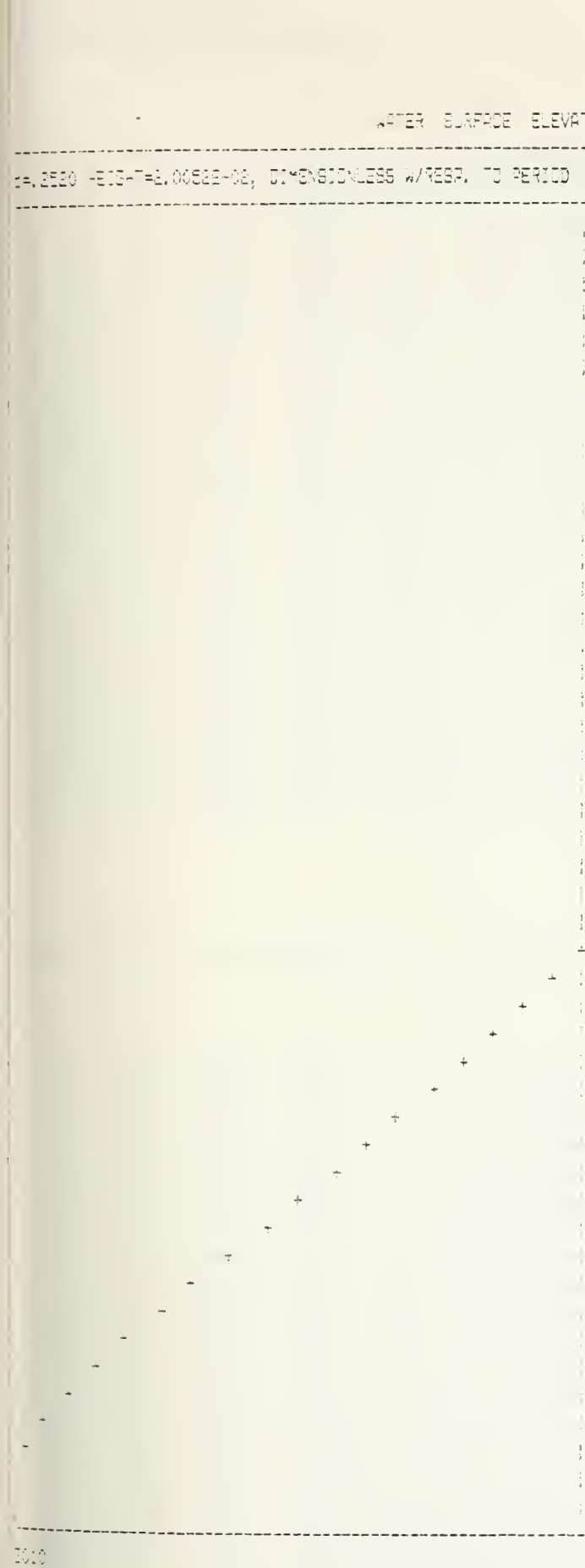
H/G=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



	V *SQRT(K/G)	DIST. *K	ANGLE DEGREES
-.23254	.00000	3.14159	180.00
-.23217	.01442	3.07514	176.25
-.23107	.02882	3.01069	172.50
-.22924	.04318	2.94524	168.75
-.22669	.05748	2.87975	165.00
-.22341	.07171	2.81434	161.25
-.21941	.08584	2.74889	157.50
-.21469	.09985	2.68344	153.75
-.20923	.11374	2.61799	150.00
-.20305	.12747	2.55254	146.25
-.19611	.14102	2.48709	142.50
-.18841	.15435	2.42164	138.75
-.17994	.16747	2.35619	135.00
-.17069	.18030	2.29074	131.25
-.16065	.19282	2.22529	127.50
-.14981	.20499	2.15984	123.75
-.13818	.21680	2.09440	120.00
-.12575	.22821	2.02895	116.25
-.11253	.23919	1.96350	112.50
-.09851	.24973	1.89805	108.75
-.08370	.25980	1.83260	105.00
-.06806	.26938	1.76715	101.25
-.05160	.27842	1.70170	97.50
-.03429	.28687	1.63625	93.75
-.01612	.29469	1.57080	90.00
.00294	.30178	1.50535	86.25
.02290	.30805	1.43990	82.50
.04376	.31342	1.37445	78.75
.06551	.31777	1.30900	75.00
.08815	.32099	1.24355	71.25
.11165	.32300	1.17810	67.50
.13600	.32369	1.11265	63.75
.16117	.32297	1.04720	60.00
.18715	.32077	.98175	56.25
.21393	.31698	.91630	52.50
.24148	.31150	.85085	48.75
.26978	.30419	.78540	45.00
.29877	.29486	.71995	41.25
.32833	.28330	.65450	37.50
.35827	.26922	.58905	33.75
.38827	.25233	.52360	30.00
.41787	.23230	.45815	26.25
.44643	.20885	.39270	22.50
.47315	.18177	.32725	18.75
.49708	.15106	.26180	15.00
.51719	.11699	.19635	11.25
.53245	.07977	.13090	7.50
.54200	.04046	.06545	3.75
.54525	.00000	.00000	.00

.5525 -.23254

WATER SURFACE ELEVATION



ELEV.VS.	TIME	DIST.	ANGLE
**	(*G)**.5	*K	DEGREES
-.27337	3.98154	3.14159	180.00
-.27302	3.85894	3.07854	176.25
-.27198	3.83314	3.01069	172.50
-.27022	3.77644	2.94524	168.75
-.26773	3.71475	2.87973	165.00
-.26447	3.65205	2.81434	161.25
-.26042	3.59135	2.74889	157.50
-.25555	3.52985	2.68344	153.75
-.24997	3.46735	2.61793	150.00
-.24356	3.40635	2.55254	146.25
-.23640	3.34455	2.48703	142.50
-.22853	3.28285	2.42154	138.75
-.21998	3.22115	2.35619	135.00
-.21077	3.15946	2.29074	131.25
-.20093	3.09776	2.22519	127.50
-.19044	3.03606	2.15984	123.75
-.17939	2.97436	2.09440	120.00
-.16741	2.91266	2.02895	116.25
-.15478	2.85096	1.96350	112.50
-.14122	2.78926	1.89805	108.75
-.12697	2.72757	1.83260	105.00
-.11169	2.66587	1.76715	101.25
-.09547	2.60417	1.70170	97.50
-.07833	2.54247	1.63625	93.75
-.06030	2.48077	1.57080	90.00
-.04147	2.41907	1.50535	86.25
-.02193	2.35737	1.43990	82.50
-.00175	2.29567	1.37445	78.75
.01934	2.23399	1.30900	75.00
.04010	2.17219	1.24355	71.25
.06158	2.11053	1.17810	67.50
.08363	2.04888	1.11265	63.75
.10617	.98713	1.04720	60.00
.12915	.92548	.98175	56.25
.15273	.86373	.91630	52.50
.17702	.80208	.85085	48.75
.20191	.74033	.78540	45.00
.22738	.67869	.71995	41.25
.25337	.61699	.65450	37.50
.27987	.55529	.58905	33.75
.30681	.49359	.52360	30.00
.32996	.43189	.45815	26.25
.35353	.37019	.39270	22.50
.37504	.30849	.32725	18.75
.39381	.24680	.26180	15.00
.40581	.18510	.19635	11.25
.42065	.12340	.13090	7.50
.43771	.06170	.06545	3.75
.43010	.00000	.00000	.00

3010

-.27337

UTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.39381	.49708	.15106	.19279	-.27932	-.00112	.2470925	.1927885	.7871401	.6141490	.0000000	.0000000	.0000000	.0000000
.26108	.42996	.12772	.15933	-.27390	.09478	.1848666	.1593270	.5643747	.4864055	.0286678	.0233888	.0896958	.0730403
.12835	.37271	.10867	.13285	-.26009	.19201	.1389105	.1328463	.4056385	.3879300	.0501558	.0427594	.1540725	.1310673
-.00439	.32367	.09290	.11161	-.24197	.29139	.1047652	.1116142	.2920233	.3111143	.0663278	.0589835	.2003742	.1774606
-.13712	.28155	.07971	.09439	-.22196	.39332	.0792700	.0943855	.2104361	.2505627	.0785417	.0726551	.2337208	.2147374
-.26986	.24527	.06859	.08026	-.20154	.49795	.0601566	.0802581	.1517115	.2024063	.0877950	.0842456	.2577554	.2447995
-.40259	.21396	.05914	.06857	-.18159	.60527	.0457796	.0685702	.1093768	.1638285	.0948256	.0941229	.2750830	.2691054
-.53532	.18691	.05107	.05883	-.16260	.71517	.0349350	.0588284	.0788298	.1327447	.1001824	.1025779	.2875737	.2887880
-.66806	.16351	.04414	.05066	-.14486	.82751	.0267359	.0506591	.0567801	.1075868	.1042753	.1098443	.2965737	.3047380
-.80079	.14327	.03816	.04378	-.12848	.94212	.0205249	.0437752	.0408653	.0871567	.1074119	.1161116	.3030541	.3176626
-.93352	.12575	.03299	.03795	-.11348	1.05881	.0158124	.0379529	.0293838	.0705268	.1098235	.1215356	.3077163	.3281275
-1.06626	.11060	.02850	.03302	-.09982	1.17741	.0122322	.0330156	.0211071	.0569696	.1116847	.1262456	.3110673	.3365891
-1.19899	.09752	.02458	.02882	-.08742	1.29773	.0095094	.0288223	.0151467	.0459083	.1131276	.1303496	.3134733	.3434167
-1.33173	.08624	.02115	.02526	-.07621	1.41961	.0074374	.0252598	.0108591	.0368811	.1142523	.1339398	.3151992	.3489112
-1.46446	.07655	.01813	.02224	-.06606	1.54292	.0058600	.0222362	.0077782	.0295150	.1151348	.1370910	.3164361	.3533177
-1.59719	.06826	.01546	.01968	-.05686	1.66750	.0046597	.0196767	.0055665	.0235059	.1158330	.1398726	.3173218	.3568366
-1.72993	.06122	.01309	.01752	-.04852	1.79325	.0037473	.0175202	.0039791	.0186042	.1163909	.1423413	.3179553	.3596313
-1.86266	.05528	.01096	.01572	-.04091	1.92006	.0030556	.0157169	.0028391	.0149031	.1168424	.1445471	.3184078	.3618351
-1.99539	.05034	.00904	.01423	-.03393	2.04783	.0025339	.0142259	.0020180	.0113256	.1172134	.1465343	.3187302	.3635562
-2.12813	.04630	.00729	.01301	-.02749	2.17649	.0021440	.0130146	.0014229	.0086374	.1175238	.1483422	.3189585	.3649813
-2.26086	.04310	.00568	.01206	-.02148	2.30598	.0018575	.0120566	.0009862	.0064013	.1177894	.1500061	.3191184	.3658794
-2.39360	.04067	.00417	.01133	-.01581	2.43624	.0016537	.0113316	.0006585	.0045123	.1180224	.1515583	.3192276	.3666037
-2.52633	.03896	.00274	.01082	-.01040	2.56724	.0015178	.0108243	.0004029	.0028735	.1182329	.1530287	.3192980	.3670939
-2.65906	.03795	.00136	.01052	-.00516	2.69894	.0014401	.0105241	.0001911	.0013959	.1184292	.1544455	.3193374	.3673773
-2.79180	.03761	.00000	.01042	.00000	2.83134	.0014147	.0104247	.0000000	.0000000	.1186187	.1558358	.3193501	.3674700

UTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30501	.38827	.25233	.30351	-.19190	.00000	.1507557	.3035056	.4668615	.9398987	.0000000	.0000000	.0000000	.0000000
.17598	.34013	.21667	.25777	-.19651	.10386	.1156864	.2577663	.3433312	.7649922	.0171900	.0362115	.0522711	.1095942
.04694	.29804	.18667	.21973	-.19252	.20772	.0888256	.2197288	.2521528	.6237531	.0303845	.0670180	.0906898	.1995916
-.08209	.26127	.16125	.18759	-.18342	.31246	.0682638	.1879890	.1849749	.5093951	.0405194	.0933226	.1188919	.2726988
-.21112	.22918	.13959	.16139	-.17147	.41858	.0525224	.1613914	.1355432	.4164986	.0483121	.1158635	.1395707	.3324345
-.34016	.20116	.12104	.13900	-.15812	.52634	.0404661	.1390047	.0992082	.3407896	.0543115	.1352442	.1547162	.3812923
-.46919	.17671	.10508	.12008	-.14432	.63586	.0312264	.1200836	.0725266	.2789069	.0589358	.1519597	.1657950	.4212732
-.59822	.15537	.09129	.10403	-.13068	.74715	.0241405	.1040317	.0529539	.2282012	.0625089	.1664189	.1738916	.4539902
-.72726	.13676	.07934	.09037	-.11755	.86018	.0187027	.0903707	.0386124	.1865738	.0653730	.1789612	.1797991	.4807502
-.85629	.12053	.06895	.07871	-.10514	.97485	.0145270	.0787144	.0281171	.1523522	.0674169	.1898700	.1841043	.5026166
-.98533	.10639	.05988	.06875	-.09356	1.09108	.0113187	.0687499	.0204470	.1241948	.0690844	.1993839	.1872375	.5204585
-1.11436	.09409	.05195	.06022	-.08285	1.20874	.0088527	.0602218	.0148498	.1010184	.0703858	.2077048	.1895147	.5349886
-1.24339	.08341	.04499	.05292	-.07301	1.32773	.0069556	.0529209	.0107716	.0819429	.0714057	.2150044	.1911677	.5467927
-1.37243	.07415	.03885	.04667	-.06399	1.44793	.0054986	.0466746	.0078045	.0662485	.0722093	.2214300	.1923662	.5563535
-1.50146	.06617	.03342	.04134	-.05574	1.56925	.0043778	.0413405	.0056489	.0533432	.0728465	.2271084	.1932342	.5640692
-1.63049	.05930	.02859	.03680	-.04819	1.69158	.0035170	.0368008	.0040843	.0427369	.0733559	.2321499	.1938621	.5702680
-1.75953	.05345	.02427	.03296	-.04128	1.81485	.0028569	.0329579	.0029491	.0340214	.0737671	.2366505	.1943159	.5752202
-1.88856	.04850	.02038	.02973	-.03492	1.93897	.0023524	.0297309	.0021248	.0268540	.0741032	.2406949	.1946433	.5791477
-2.01759	.04437	.01685	.02705	-.02905	2.06388	.0019689	.0270535	.0015243	.0209449	.0743820	.2443585	.1948787	.5822315
-2.14663	.04099	.01362	.02487	-.02359	2.18953	.0016803	.0248717	.0010841	.0160464	.0746174	.2477085	.1950470	.5846181
-2.27566	.03830	.01062	.02314	-.01847	2.31585	.0014670	.0231420	.0007572	.0119444	.0748205	.2508062	.1951658	.5864239
-2.40470	.03626	.00781	.02183	-.01362	2.44281	.0013145	.0218302	.0005088	.0084505	.0749999	.2537077	.1952475	.5877397
-2.53373	.03482	.00513	.02091	-.00897	2.57039	.0012123	.0209110	.0003129	.0053964	.0751629	.2564652	.1953005	.5886331
-2.66276	.03397	.00254	.02037	-.00445	2.69856	.0011537	.0203664	.0001489	.0026280	.0753156	.2591283	.1953303	.5891508
-2.79180	.03368	.00000	.02019	.00000	2.82731	.0011346	.0201861	.0000000	.0000000	.0754632	.2617446	.1953399	.5893204

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

EPTH: FINITE, HEIGHT/DEPTH= .2520

AVE HEIGHT 2.005161E-02, DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .00

OLUTION OF ORDER 6 NON-DIMENSIONALIZED BY WAVE NUMBER, 1 HEIGHT STEP(S).

WATER DEPTH	2.7918
WAVE HEIGHT	.70347
WAVE PERIOD	5.9231
WAVE SPEED	1.0608
MEAN EULERIAN FLUID SPEED	6.26374E-22
MEAN MASS TRANSPORT SPEED	1.99885E-02
MEAN FLUID SPEED RELATIVE TO WAVE	1.0608
VOLUME FLUX DUE TO WAVES	5.58038E-02
BERNOULLI CONSTANT	.56299

OLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.43010	.54525	.00000	.00000	-.32029	.00000	.2973029	.0000000	.9578789	.0000000	.0000000	.0000000	.0000000	.0000000
.29585	.46881	.00000	.00000	-.30866	.09191	.2197819	.0000000	.6786096	.0000000	.0347082	.0000000	.1098457	.0000000
.16161	.40440	.00000	.00000	-.28949	.18595	.1635360	.0000000	.4829879	.0000000	.0604376	.0000000	.1878155	.0000000
.02736	.34975	.00000	.00000	-.26682	.28283	.1223233	.0000000	.3448488	.0000000	.0756253	.0000000	.2433822	.0000000
-.10688	.30314	.00000	.00000	-.24299	.38286	.0918959	.0000000	.2467325	.0000000	.0940043	.0000000	.2930908	.0000000
-.24113	.26324	.00000	.00000	-.21935	.48607	.0692971	.0000000	.1767540	.0000000	.1048240	.0000000	.3115164	.0000000
-.37337	.22898	.00000	.00000	-.19698	.59241	.0524332	.0000000	.1267007	.0000000	.1129949	.0000000	.3318352	.0000000
-.50962	.19950	.00000	.00000	-.17540	.70170	.0398007	.0000000	.0908322	.0000000	.1191859	.0000000	.3464866	.0000000
-.64387	.17409	.00000	.00000	-.15571	.81374	.0303085	.0000000	.0651005	.0000000	.1238918	.0000000	.3569532	.0000000
-.77811	.15218	.00000	.00000	-.13767	.92831	.0231578	.0000000	.0466325	.0000000	.1274805	.0000000	.3644531	.0000000
-.91235	.13327	.00000	.00000	-.12125	1.04519	.0177599	.0000000	.0333786	.0000000	.1302271	.0000000	.3698237	.0000000
-1.04660	.11695	.00000	.00000	-.10639	1.16417	.0136782	.0000000	.0238711	.0000000	.1323373	.0000000	.3736664	.0000000
-1.18085	.10290	.00000	.00000	-.09298	1.28505	.0105877	.0000000	.0170582	.0000000	.1339661	.0000000	.3764136	.0000000
-1.31509	.09081	.00000	.00000	-.08088	1.40764	.0082455	.0000000	.0121762	.0000000	.1352303	.0000000	.3783758	.0000000
-1.44934	.08043	.00000	.00000	-.06998	1.53178	.0064696	.0000000	.0086852	.0000000	.1362180	.0000000	.3797760	.0000000
-1.58359	.07158	.00000	.00000	-.06014	1.65730	.0051232	.0000000	.0061899	.0000000	.1369961	.0000000	.3807745	.0000000
-1.71783	.06406	.00000	.00000	-.05124	1.78408	.0041033	.0000000	.0044058	.0000000	.1376154	.0000000	.3814858	.0000000
-1.85208	.05773	.00000	.00000	-.04314	1.91200	.0033327	.0000000	.0031318	.0000000	.1381146	.0000000	.3819918	.0000000
-1.98632	.05247	.00000	.00000	-.03575	2.04095	.0027533	.0000000	.0022177	.0000000	.1385231	.0000000	.3823509	.0000000
-2.12057	.04818	.00000	.00000	-.02893	2.17086	.0023215	.0000000	.0015582	.0000000	.1388637	.0000000	.3826043	.0000000
-2.25481	.04478	.00000	.00000	-.02259	2.30166	.0020050	.0000000	.0010767	.0000000	.1391541	.0000000	.3827812	.0000000
-2.38906	.04219	.00000	.00000	-.01662	2.43328	.0017803	.0000000	.0007170	.0000000	.1394082	.0000000	.3829016	.0000000
-2.52331	.04038	.00000	.00000	-.01093	2.56567	.0016308	.0000000	.0004379	.0000000	.1396372	.0000000	.3829791	.0000000
-2.65755	.03931	.00000	.00000	-.00542	2.69882	.0015453	.0000000	.0002074	.0000000	.1398504	.0000000	.3830224	.0000000
-2.79180	.03895	.00000	.00000	.00000	2.83271	.0015175	.0000000	.0000000	.0000000	.1400559	.0000000	.3830363	.0000000

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

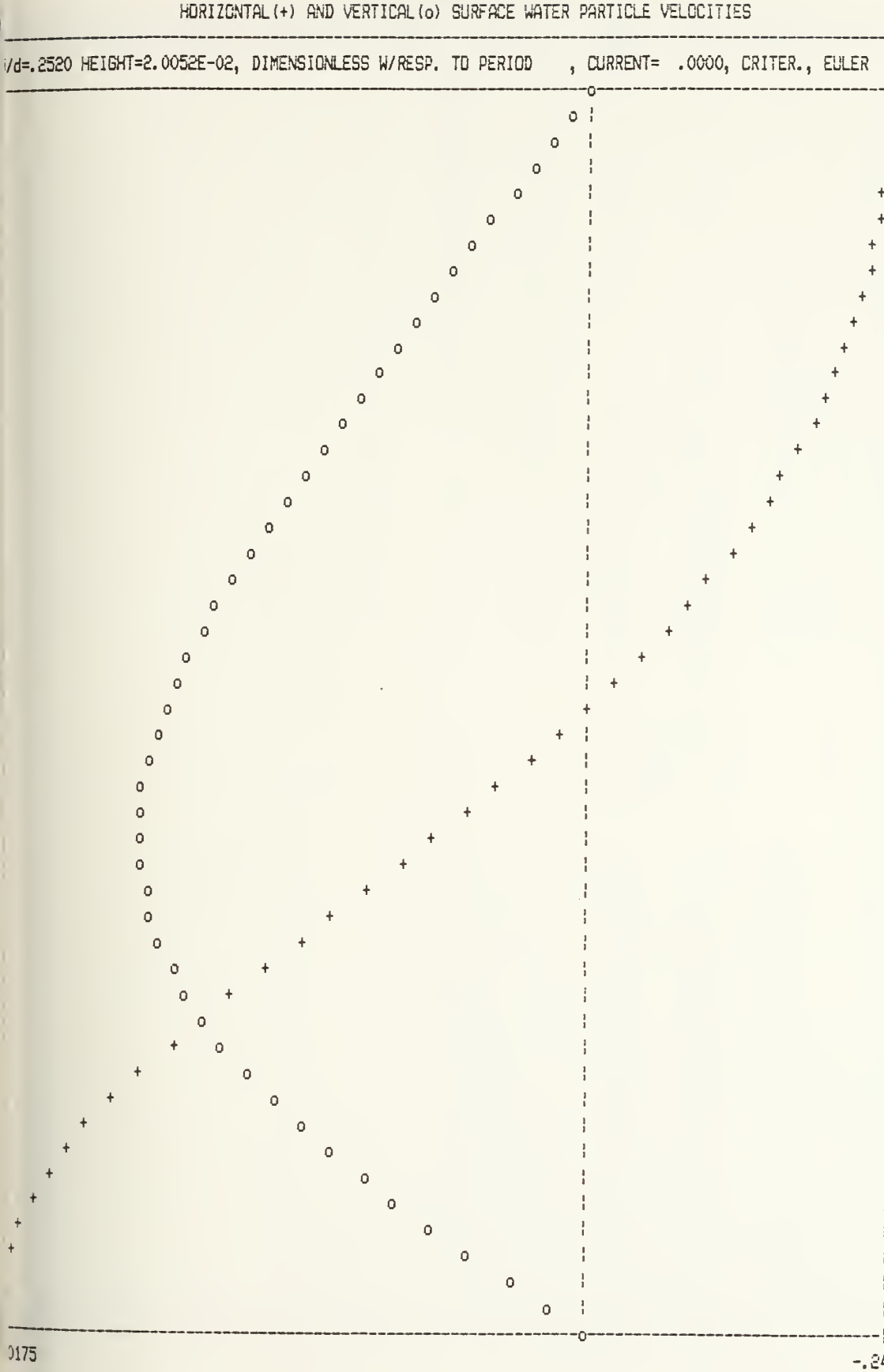
/d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

Ax	Ay	DIST.	ANGLE
*1/G	*1/G	*K	DEGREES
.00000	.32262	3.14159	180.00
.01748	.32235	3.07614	176.25
.03495	.32155	3.01069	172.50
.05243	.32020	2.94524	168.75
.06991	.31830	2.87979	165.00
.08738	.31583	2.81434	161.25
.10484	.31276	2.74889	157.50
.12228	.30909	2.68344	153.75
.13968	.30477	2.61799	150.00
.15703	.29979	2.55254	146.25
.17430	.29411	2.48709	142.50
.19146	.28769	2.42164	138.75
.20846	.28051	2.35619	135.00
.22527	.27252	2.29074	131.25
.24183	.26369	2.22529	127.50
.25808	.25399	2.15984	123.75
.27394	.24339	2.09440	120.00
.28933	.23186	2.02895	116.25
.30417	.21938	1.96350	112.50
.31836	.20593	1.89805	108.75
.33178	.19150	1.83260	105.00
.34431	.17610	1.76715	101.25
.35585	.15973	1.70170	97.50
.36625	.14241	1.63625	93.75
.37538	.12418	1.57080	90.00
.38310	.10509	1.50535	86.25
.38927	.08519	1.43990	82.50
.39375	.06456	1.37445	78.75
.39640	.04329	1.30900	75.00
.39710	.02149	1.24355	71.25
.39572	-.00073	1.17810	67.50
.39215	-.02321	1.11265	63.75
.38630	-.04583	1.04720	60.00
.37809	-.06840	.98175	56.25
.36747	-.09077	.91630	52.50
.35440	-.11273	.85085	48.75
.33888	-.13412	.78540	45.00
.32093	-.15472	.71995	41.25
.30061	-.17435	.65450	37.50
.27800	-.19281	.58905	33.75
.25322	-.20992	.52360	30.00
.22640	-.22549	.45815	26.25
.19774	-.23936	.39270	22.50
.16743	-.25137	.32725	18.75
.13571	-.26139	.26180	15.00
.10282	-.26931	.19635	11.25
.06905	-.27503	.13090	7.50
.03468	-.27850	.06545	3.75
.00000	-.27965	.00000	.00

9710 -.27965

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

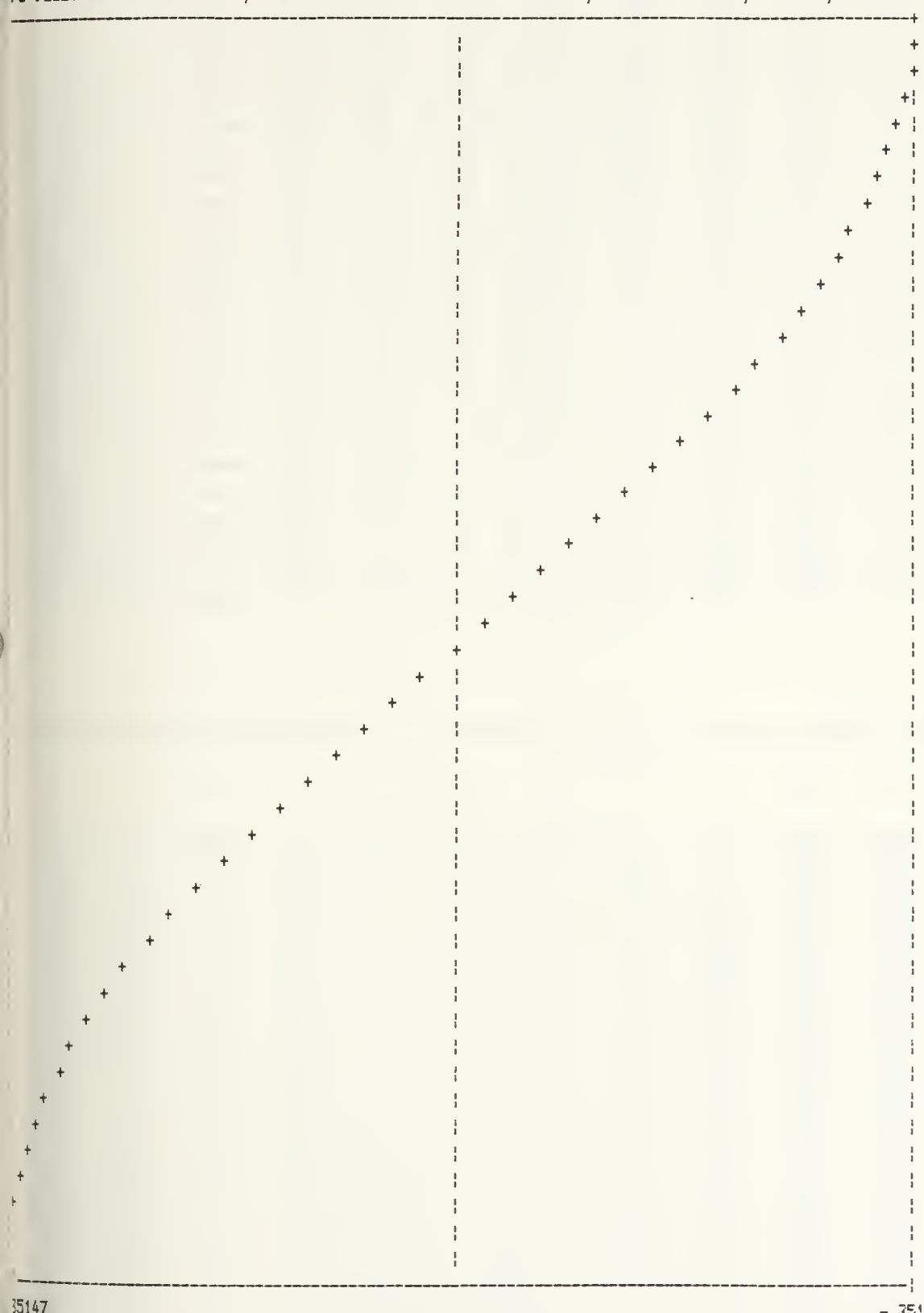
/d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.24986	.00000	3.14159	180.00
-.24951	.01611	3.07614	176.25
-.24846	.03222	3.01069	172.50
-.24669	.04834	2.94524	168.75
-.24421	.06447	2.87979	165.00
-.24099	.08061	2.81434	161.25
-.23700	.09676	2.74889	157.50
-.23224	.11292	2.68344	153.75
-.22666	.12906	2.61799	150.00
-.22024	.14518	2.55254	146.25
-.21294	.16125	2.48709	142.50
-.20473	.17725	2.42164	138.75
-.19556	.19315	2.35619	135.00
-.18540	.20888	2.29074	131.25
-.17421	.22442	2.22529	127.50
-.16195	.23969	2.15984	123.75
-.14860	.25463	2.09440	120.00
-.13411	.26916	2.02895	116.25
-.11847	.28320	1.96350	112.50
-.10165	.29664	1.89805	108.75
-.08365	.30939	1.83260	105.00
-.06447	.32133	1.76715	101.25
-.04412	.33234	1.70170	97.50
-.02261	.34230	1.63625	93.75
.00000	.35107	1.57080	90.00
.02367	.35853	1.50535	86.25
.04832	.36453	1.43990	82.50
.07387	.36894	1.37445	78.75
.10021	.37164	1.30900	75.00
.12721	.37249	1.24355	71.25
.15472	.37137	1.17810	67.50
.18258	.36819	1.11265	63.75
.21061	.36286	1.04720	60.00
.23861	.35528	.98175	56.25
.26636	.34543	.91630	52.50
.29365	.33325	.85085	48.75
.32022	.31876	.78540	45.00
.34585	.30196	.71995	41.25
.37029	.28291	.65450	37.50
.39329	.26168	.58905	33.75
.41462	.23840	.52360	30.00
.43405	.21319	.45815	26.25
.45137	.18623	.39270	22.50
.46638	.15770	.32725	18.75
.47891	.12783	.26180	15.00
.48881	.09686	.19635	11.25
.49597	.06505	.13090	7.50
.50030	.03267	.06545	3.75
.50175	.00000	.00000	.00

WATER SURFACE ELEVATION

/d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



ELEV.VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.35147	2.96043	3.14159	180.00
-.35072	2.89876	3.07614	176.25
-.34846	2.83708	3.01069	172.50
-.34472	2.77540	2.94524	168.75
-.33949	2.71373	2.87979	165.00
-.33282	2.65205	2.81434	161.25
-.32472	2.59038	2.74889	157.50
-.31522	2.52870	2.68344	153.75
-.30438	2.46703	2.61799	150.00
-.29224	2.40535	2.55254	146.25
-.27884	2.34367	2.48709	142.50
-.26425	2.28200	2.42164	138.75
-.24853	2.22032	2.35619	135.00
-.23174	2.15865	2.29074	131.25
-.21396	2.09697	2.22529	127.50
-.19527	2.03530	2.15984	123.75
-.17574	1.97362	2.09440	120.00
-.15545	1.91195	2.02895	116.25
-.13450	1.85027	1.96350	112.50
-.11298	1.78859	1.89805	108.75
-.09097	1.72692	1.83260	105.00
-.06857	1.66524	1.76715	101.25
-.04588	1.60357	1.70170	97.50
-.02299	1.54189	1.63625	93.75
.00000	1.48022	1.57080	90.00
.02299	1.41854	1.50535	86.25
.04588	1.35686	1.43990	82.50
.06857	1.29519	1.37445	78.75
.09097	1.23351	1.30900	75.00
.11298	1.17184	1.24355	71.25
.13450	1.11016	1.17810	67.50
.15545	1.04849	1.11265	63.75
.17574	.98681	1.04720	60.00
.19527	.92513	.98175	56.25
.21396	.86346	.91630	52.50
.23174	.80178	.85085	48.75
.24853	.74011	.78540	45.00
.26425	.67843	.71995	41.25
.27884	.61676	.65450	37.50
.29224	.55508	.58905	33.75
.30438	.49341	.52360	30.00
.31522	.43173	.45815	26.25
.32472	.37005	.39270	22.50
.33282	.30838	.32725	18.75
.33949	.24670	.26180	15.00
.34472	.18503	.19635	11.25
.34846	.12335	.13090	7.50
.35072	.06168	.06545	3.75
.35147	.00000	.00000	.00

35147 -.35147

SOLUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.33949	.47891	.12783	.13571	-.26139	-.00924	.2293526	.1357068	.7176902	.4246537	.0000000	.0000000	.0000000	.0000000
.20911	.42060	.11214	.11913	-.25546	.08738	.1769084	.1191286	.5305159	.3572448	.0264848	.0166131	.0813726	.0509733
.07873	.36946	.09836	.10459	-.24419	.18515	.1365023	.1045864	.3915478	.2999991	.0469166	.0311975	.1414835	.0938201
-.05166	.32461	.08625	.09183	-.22961	.28462	.1053712	.0918326	.2885116	.2514423	.0626847	.0440024	.1858177	.1297695
-.18204	.28528	.07562	.08065	-.21318	.38612	.0813861	.0806502	.2122279	.2103089	.0748598	.0552468	.2184618	.1598718
-.31242	.25081	.06626	.07085	-.19595	.48983	.0629068	.0708488	.1558381	.1755125	.0842665	.0651233	.2424566	.1850242
-.44281	.22061	.05804	.06226	-.17865	.59579	.0486697	.0622614	.1142228	.1461213	.0915403	.0738010	.2600623	.2059920
-.57319	.19417	.05081	.05474	-.16175	.70399	.0377010	.0547420	.0835648	.1213365	.0971710	.0814286	.2729564	.2234280
-.70357	.17103	.04444	.04816	-.14558	.81435	.0292506	.0481624	.0610207	.1004733	.1015357	.0881371	.2823822	.2378882
-.83396	.15080	.03882	.04241	-.13033	.92675	.0227408	.0424108	.0444753	.0829449	.1049251	.0940417	.2892597	.2498455
-.96434	.13314	.03387	.03739	-.11610	1.04108	.0177263	.0373891	.0323570	.0682489	.1075632	.0992440	.2942685	.2597021
-1.09472	.11775	.02949	.03301	-.10291	1.15720	.0138642	.0330119	.0234996	.0559547	.1096226	.1038336	.2979099	.2677991
-1.22511	.10436	.02562	.02920	-.09076	1.27497	.0108904	.0292047	.0170391	.0456937	.1112364	.1078896	.3005527	.2744257
-1.35549	.09274	.02218	.02590	-.07961	1.39425	.0086015	.0259027	.0123364	.0371501	.1125071	.1114821	.3024677	.2798265
-1.48587	.08271	.01912	.02305	-.06940	1.51493	.0068410	.0230496	.0089195	.0300528	.1135138	.1146734	.3038534	.2842075
-1.61626	.07408	.01638	.02060	-.06003	1.63689	.0054885	.0205969	.0064405	.0241694	.1143175	.1175188	.3048548	.2877424
-1.74664	.06672	.01393	.01850	-.05145	1.76001	.0044515	.0185028	.0046433	.0192996	.1149656	.1200678	.3055774	.2905762
-1.87702	.06049	.01171	.01673	-.04354	1.88421	.0036592	.0167316	.0033397	.0152707	.1154944	.1223648	.3060978	.2928299
-2.00741	.05529	.00969	.01525	-.03623	2.00940	.0030572	.0152533	.0023917	.0119327	.1159322	.1244499	.3064714	.2946033
-2.13779	.05103	.00784	.01404	-.02943	2.13550	.0026045	.0140427	.0016979	.0091547	.1163013	.1263598	.3067380	.2959781
-2.26817	.04765	.00611	.01308	-.02305	2.26247	.0022701	.0130790	.0011839	.0068212	.1166191	.1281279	.3069259	.2970195
-2.39856	.04507	.00450	.01235	-.01700	2.39025	.0020311	.0123461	.0007945	.0048292	.1168995	.1297854	.3070549	.2977790
-2.52894	.04326	.00296	.01183	-.01119	2.51879	.0018712	.0118312	.0004879	.0030852	.1171539	.1313616	.3071385	.2982950
-2.65932	.04218	.00147	.01153	-.00556	2.64809	.0017794	.0115258	.0002320	.0015028	.1173919	.1328843	.3071854	.2985941
-2.78971	.04183	.00000	.01142	.00000	2.77811	.0017495	.0114246	.0000000	.0000000	.1176220	.1343804	.3072005	.2986921

SOLUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30438	.41462	.23840	.25322	-.20992	-.03387	.1719096	.2532177	.5319035	.7834778	.0000000	.0000000	.0000000	.0000000
.17546	.36469	.20944	.22263	-.20856	.06800	.1329979	.2226259	.3943611	.6601230	.0196544	.0306730	.0597072	.0930548
.04654	.32083	.18396	.19575	-.20183	.17042	.1029302	.1957528	.2919356	.5552035	.0348624	.0576417	.1039460	.1713949
-.08238	.28231	.16154	.17215	-.19161	.27395	.0796965	.1721513	.2157645	.4660700	.0466345	.0813569	.1366724	.2372264
-.21130	.24848	.14182	.15143	-.17929	.37895	.0617436	.1514286	.1592001	.3904444	.0557518	.1022149	.1608427	.2924374
-.34022	.21880	.12445	.13324	-.16586	.48562	.0478713	.1332396	.1172600	.3263686	.0628176	.1205647	.1786634	.3386433
-.46914	.19275	.10916	.11728	-.15205	.59404	.0371522	.1172817	.0862141	.2721599	.0682982	.1367133	.1917793	.3772246
-.59806	.16991	.09568	.10329	-.13832	.70425	.0288698	.1032893	.0632723	.2263736	.0725540	.1509313	.2014153	.4093601
-.72698	.14990	.08379	.09103	-.12501	.81620	.0224703	.0910295	.0463501	.1877689	.0758634	.1634572	.2084815	.4360558
-.85590	.13239	.07330	.08030	-.11232	.92983	.0175260	.0802983	.0338919	.1552812	.0784415	.1745010	.2136539	.4581689
-.98482	.11707	.06403	.07092	-.10038	1.04505	.0137063	.0709170	.0247383	.1279970	.0804548	.1842483	.2174333	.4764290
-1.11374	.10371	.05583	.06273	-.08924	1.16175	.0107559	.0627296	.0180265	.1051325	.0820316	.1928632	.2201899	.4914566
-1.24266	.09207	.04855	.05560	-.07891	1.27984	.0084775	.0555997	.0131151	.0860151	.0832714	.2004907	.2221973	.5037780
-1.37158	.08197	.04208	.04941	-.06938	1.39921	.0067189	.0494086	.0095282	.0700676	.0842509	.2072596	.2236569	.5138391
-1.50050	.07323	.03631	.04405	-.06060	1.51976	.0053623	.0440535	.0069132	.0567939	.0850297	.2132842	.2247167	.5220166
-1.62942	.06571	.03115	.03945	-.05253	1.64140	.0043173	.0394450	.0050093	.0457674	.0856537	.2186665	.2254852	.5286278
-1.75834	.05928	.02651	.03551	-.04509	1.76403	.0035139	.0355066	.0036241	.0366202	.0861585	.2234979	.2260417	.5339385
-1.88726	.05384	.02230	.03217	-.03822	1.88759	.0028984	.0321726	.0026156	.0290339	.0865718	.2278605	.2264439	.5381706
-2.01618	.04929	.01847	.02939	-.03184	2.01200	.0024296	.0293876	.0018793	.0227320	.0869152	.2318297	.2267337	.5415074
-2.14510	.04557	.01494	.02711	-.02589	2.13720	.0020762	.0271053	.0013383	.0174721	.0872057	.2354702	.2269411	.5440990
-2.27402	.04260	.01167	.02529	-.02030	2.25315	.0018147	.0252875	.0009358	.0130403	.0874565	.2388475	.2270877	.5460658
-2.40294	.04034	.00858	.02390	-.01498	2.38980	.0016274	.0239042	.0006294	.0092452	.0876784	.2420164	.2271886	.5475023
-2.53186	.03875	.00564	.02293	-.00987	2.51712	.0015019	.0229322	.0003873	.0059129	.0878801	.2450375	.2272541	.5484794
-2.66079	.03781	.00280	.02236	-.00490	2.64509	.0014298	.0223554	.0001843	.0028821	.0880691	.2479567	.2272909	.5490463
-2.78971	.03750	.00000	.02216	.00000	2.77369	.0014063	.0221642	.0000000	.0000000	.0882519	.2508265	.2273028	.5492321

TEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

PTH: FINITE, HEIGHT/DEPTH= .2520

VE HEIGHT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

URRENT CRITERION: EULER , MAGNITUDE= .00

LUTION OF ORDER 1 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

ATER DEPTH	2.7897
AVE HEIGHT	.70294
AVE PERIOD	5.9209
AVE SPEED	1.0612
EAN EULERIAN FLUID SPEED	1.52925E-22
EAN MASS TRANSPORT SPEED	4.54893E-02
EAN FLUID SPEED RELATIVE TO WAVE	1.0612
OLUME FLUX DUE TO WAVES	.12690
ERNOULLI CONSTANT	.50796

LUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.35147	.50175	.00000	.00000	-.27965	.00000	.2517556	.0000000	.7908087	.0000000	.0000000	.0000000	.0000000	.0000000
.22059	.44044	.00000	.00000	-.27208	.09470	.1939907	.0000000	.5839690	.0000000	.0291702	.0000000	.0899671	.0000000
.08971	.38669	.00000	.00000	-.25918	.19077	.1495296	.0000000	.4305574	.0000000	.0516505	.0000000	.1563589	.0000000
-.04118	.33957	.00000	.00000	-.24304	.28876	.1153085	.0000000	.3169288	.0000000	.0689819	.0000000	.2052752	.0000000
-.17206	.29828	.00000	.00000	-.22515	.38900	.0889690	.0000000	.2328894	.0000000	.0823500	.0000000	.2412560	.0000000
-.30294	.26210	.00000	.00000	-.20656	.49162	.0686960	.0000000	.1708307	.0000000	.0926678	.0000000	.2676759	.0000000
-.43382	.23042	.00000	.00000	-.18801	.59669	.0530924	.0000000	.1250794	.0000000	.1006378	.0000000	.2870406	.0000000
-.56471	.20269	.00000	.00000	-.16999	.70415	.0410830	.0000000	.0914096	.0000000	.1068007	.0000000	.3012079	.0000000
-.69559	.17844	.00000	.00000	-.15281	.81392	.0318400	.0000000	.0666768	.0000000	.1115729	.0000000	.3115532	.0000000
-.82647	.15725	.00000	.00000	-.13665	.92587	.0247267	.0000000	.0485444	.0000000	.1152747	.0000000	.3190935	.0000000
-.95735	.13875	.00000	.00000	-.12160	1.03986	.0192528	.0000000	.0352779	.0000000	.1181527	.0000000	.3245789	.0000000
-1.08823	.12264	.00000	.00000	-.10769	1.15575	.0150410	.0000000	.0255918	.0000000	.1203970	.0000000	.3285623	.0000000
-1.21912	.10863	.00000	.00000	-.09490	1.27339	.0118011	.0000000	.0185347	.0000000	.1221535	.0000000	.3314500	.0000000
-1.35000	.09649	.00000	.00000	-.08318	1.39263	.0093099	.0000000	.0134035	.0000000	.1235351	.0000000	.3335400	.0000000
-1.48088	.08600	.00000	.00000	-.07246	1.51334	.0073956	.0000000	.0096796	.0000000	.1246283	.0000000	.3350506	.0000000
-1.61176	.07698	.00000	.00000	-.06264	1.63539	.0059264	.0000000	.0069809	.0000000	.1255001	.0000000	.3361409	.0000000
-1.74265	.06929	.00000	.00000	-.05365	1.75867	.0048010	.0000000	.0050259	.0000000	.1262021	.0000000	.3369267	.0000000
-1.87353	.06278	.00000	.00000	-.04539	1.88308	.0039418	.0000000	.0036113	.0000000	.1267743	.0000000	.3374920	.0000000
-2.00441	.05735	.00000	.00000	-.03775	2.00852	.0032896	.0000000	.0025833	.0000000	.1272475	.0000000	.3378974	.0000000
-2.13529	.05291	.00000	.00000	-.03066	2.13493	.0027995	.0000000	.0018320	.0000000	.1276460	.0000000	.3381863	.0000000
-2.26618	.04937	.00000	.00000	-.02400	2.26224	.0024377	.0000000	.0012762	.0000000	.1279887	.0000000	.3383897	.0000000
-2.39706	.04668	.00000	.00000	-.01770	2.39040	.0021794	.0000000	.0008557	.0000000	.1282908	.0000000	.3385293	.0000000
-2.52794	.04479	.00000	.00000	-.01165	2.51936	.0020066	.0000000	.0005252	.0000000	.1285648	.0000000	.3386196	.0000000
-2.65882	.04367	.00000	.00000	-.00578	2.64911	.0019074	.0000000	.0002496	.0000000	.1288209	.0000000	.3386703	.0000000
-2.78971	.04330	.00000	.00000	.00000	2.77961	.0018751	.0000000	.0000000	.0000000	.1290684	.0000000	.3386867	.0000000

WATER SURFACE ELEVATION

=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

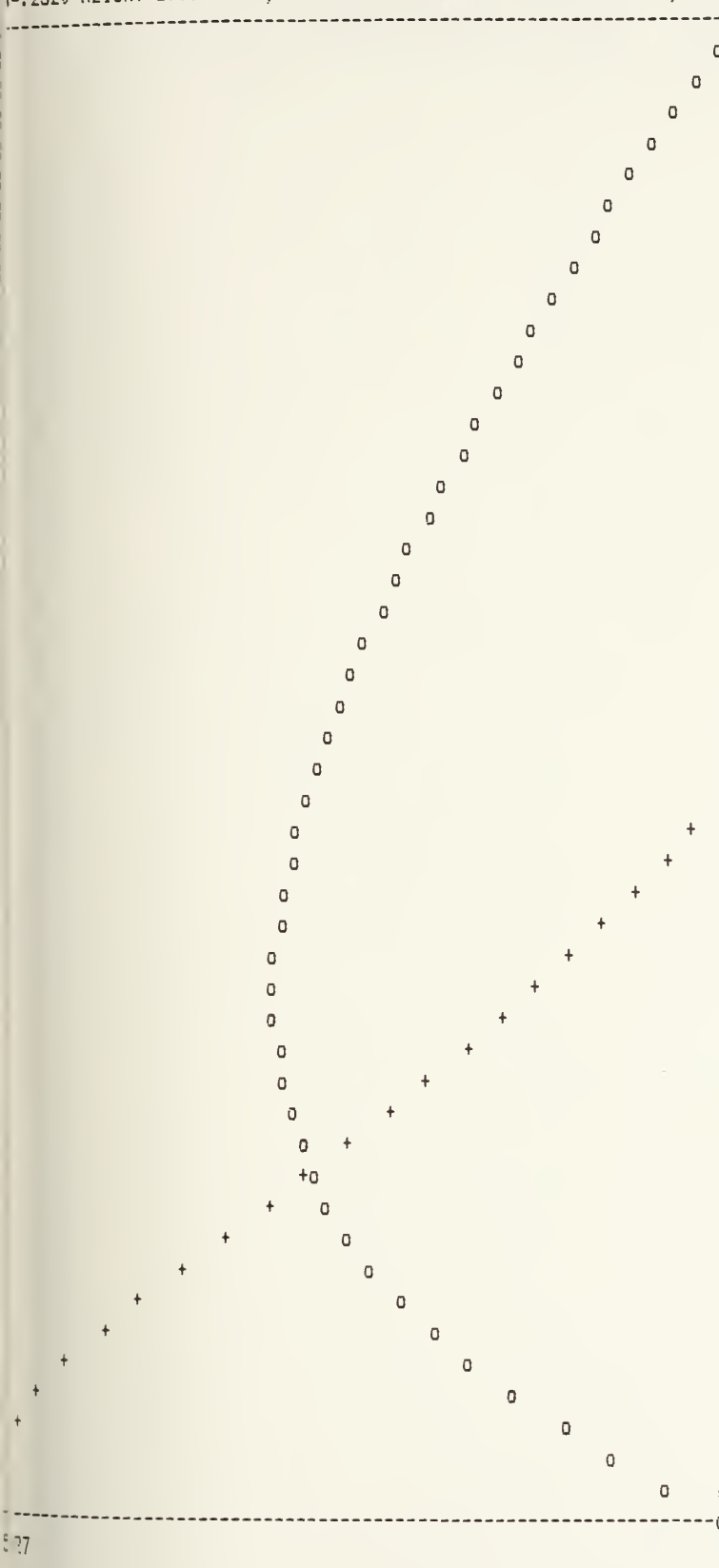
ELEV.VS.	TIME	DIST.	ANGLE
*K	(K*G)^.5	*K	DEGREES
-.27336	2.96158	3.14159	180.00
-.27299	2.89988	3.07614	176.25
-.27188	2.83818	3.01069	172.50
-.27005	2.77648	2.94524	168.75
-.26749	2.71478	2.87979	165.00
-.26422	2.65308	2.81434	161.25
-.26022	2.59138	2.74889	157.50
-.25548	2.52968	2.68344	153.75
-.25000	2.46798	2.61799	150.00
-.24377	2.40628	2.55254	146.25
-.23677	2.34458	2.48709	142.50
-.22902	2.28288	2.42164	138.75
-.22052	2.22118	2.35619	135.00
-.21129	2.15948	2.29074	131.25
-.20133	2.09778	2.22529	127.50
-.19066	2.03608	2.15984	123.75
-.17926	1.97439	2.09440	120.00
-.16711	1.91269	2.02895	116.25
-.15419	1.85099	1.96350	112.50
-.14047	1.78929	1.89805	108.75
-.12595	1.72759	1.83260	105.00
-.11062	1.66589	1.76715	101.25
-.09452	1.60419	1.70170	97.50
-.07766	1.54249	1.63625	93.75
-.06009	1.48079	1.57080	90.00
-.04182	1.41909	1.50535	86.25
-.02287	1.35739	1.43990	82.50
-.00321	1.29569	1.37445	78.75
.01717	1.23399	1.30900	75.00
.03831	1.17229	1.24355	71.25
.06022	1.11059	1.17810	67.50
.08288	1.04889	1.11265	63.75
.10622	.98719	1.04720	60.00
.13016	.92549	.98175	56.25
.15459	.86379	.91630	52.50
.17938	.80209	.85085	48.75
.20441	.74039	.78540	45.00
.22960	.67869	.71995	41.25
.25482	.61700	.65450	37.50
.27993	.55530	.58905	33.75
.30474	.49360	.52360	30.00
.32891	.43190	.45815	26.25
.35199	.37020	.39270	22.50
.37338	.30850	.32725	18.75
.40823	.18510	.19635	11.25
.39238	.24680	.26180	15.00
.42016	.12340	.13090	7.50
.42760	.06170	.06545	3.75
.43013	.00000	.00000	.00

13

-.27336

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

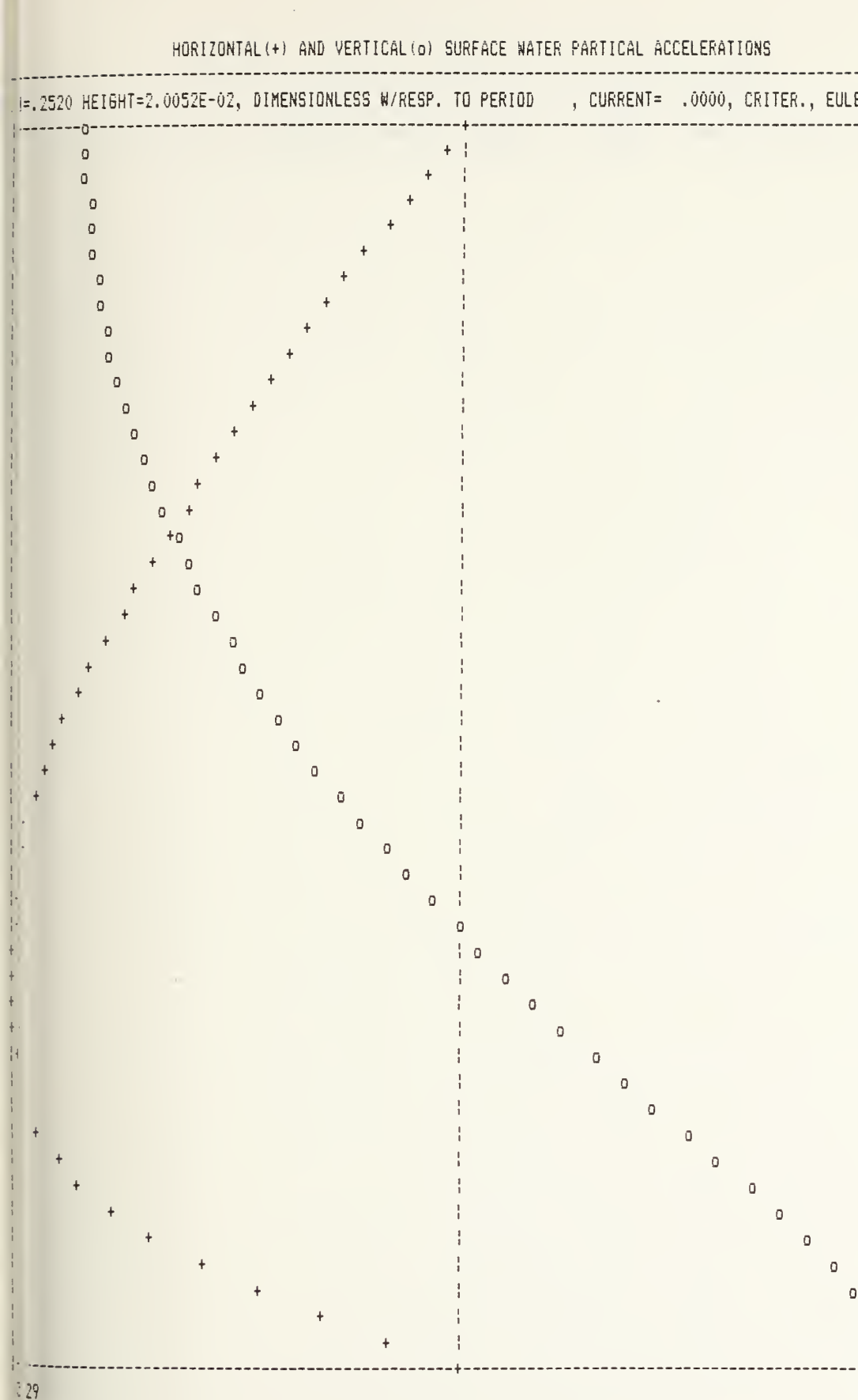
=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



U	V	DIST.	ANGLE
‡SQRT(K/G)		‡K	DEGREES
-.23255	.00000	3.14159	180.00
-.23219	.01442	3.07614	176.25
-.23111	.02883	3.01069	172.50
-.22929	.04319	2.94524	168.75
-.22675	.05750	2.87979	165.00
-.22347	.07173	2.81434	161.25
-.21946	.08586	2.74889	157.50
-.21472	.09987	2.68344	153.75
-.20924	.11374	2.61799	150.00
-.20301	.12745	2.55254	146.25
-.19605	.14098	2.48709	142.50
-.18833	.15430	2.42164	138.75
-.17985	.16739	2.35619	135.00
-.17061	.18022	2.29074	131.25
-.16058	.19276	2.22529	127.50
-.14978	.20497	2.15984	123.75
-.13818	.21682	2.09440	120.00
-.12579	.22829	2.02895	116.25
-.11260	.23934	1.96350	112.50
-.09860	.24995	1.89805	108.75
-.08378	.26007	1.83260	105.00
-.06814	.26967	1.76715	101.25
-.05165	.27869	1.70170	97.50
-.03432	.28707	1.63625	93.75
-.01612	.29476	1.57080	90.00
.00295	.30168	1.50535	86.25
.02290	.30777	1.43990	82.50
.04373	.31296	1.37445	78.75
.06544	.31721	1.30900	75.00
.08804	.32042	1.24355	71.25
.11153	.32253	1.17810	67.50
.13593	.32343	1.11265	63.75
.16121	.32301	1.04720	60.00
.18736	.32112	.98175	56.25
.21434	.31761	.91630	52.50
.24208	.31229	.85085	48.75
.27049	.30500	.78540	45.00
.29948	.29554	.71995	41.25
.32889	.28371	.65450	37.50
.35853	.26932	.58905	33.75
.38815	.25213	.52360	30.00
.41735	.23189	.45815	26.25
.44561	.20836	.39270	22.50
.47219	.18135	.32725	18.75
.49619	.15078	.26180	15.00
.51653	.11677	.19635	11.25
.53210	.07976	.13090	7.50
.54192	.04049	.06545	3.75
.54527	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



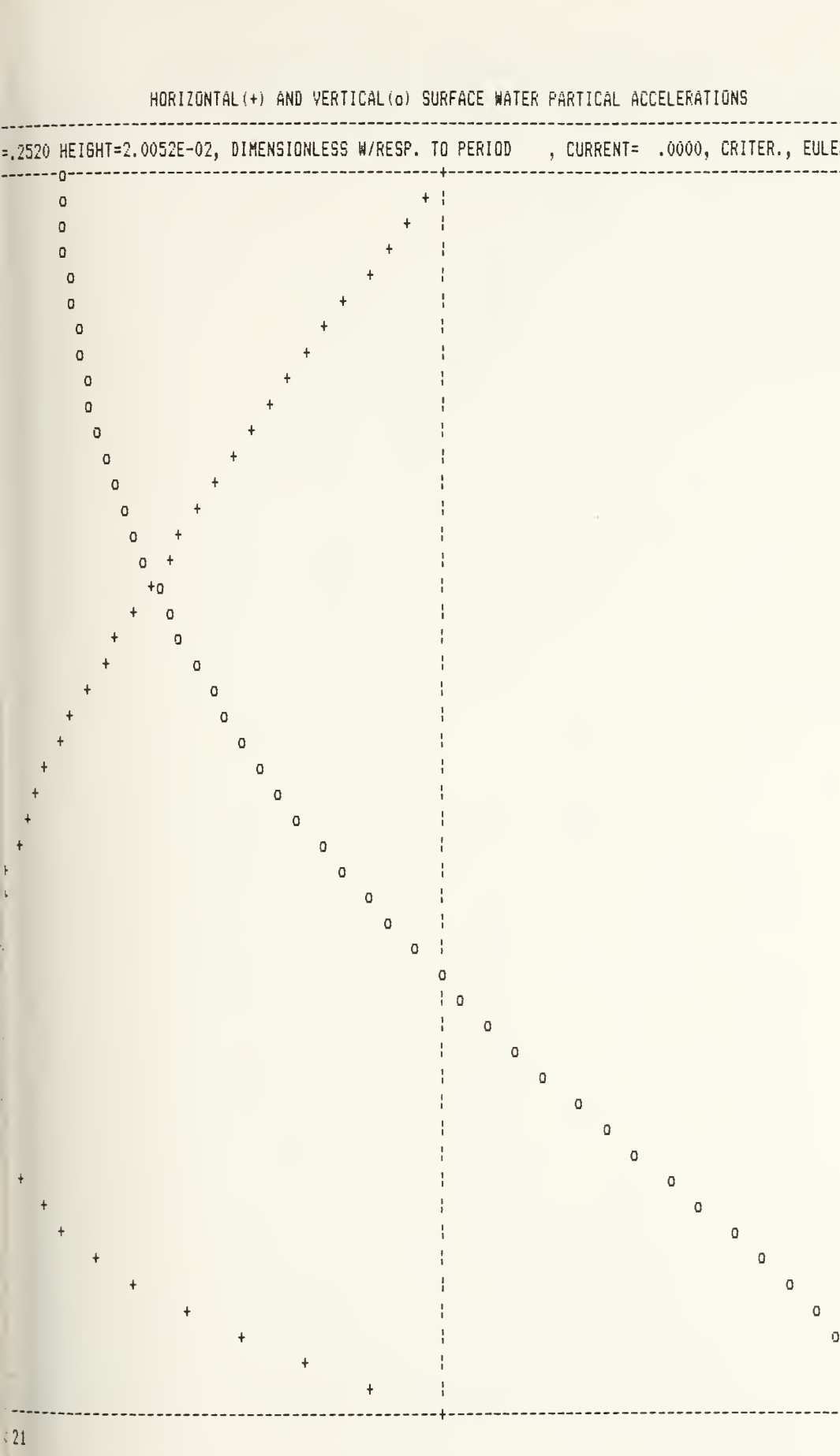
Ax	Ay	DIST.	ANGLE
*1/G	*1/G	*K	DEGREES
.00000	.28507	3.14159	180.00
.01433	.28480	3.07614	176.25
.02865	.28400	3.01069	172.50
.04294	.28265	2.94524	168.75
.05720	.28076	2.87979	165.00
.07140	.27832	2.81434	161.25
.08553	.27533	2.74889	157.50
.09958	.27179	2.68344	153.75
.11353	.26769	2.61799	150.00
.12738	.26303	2.55254	146.25
.14109	.25780	2.48709	142.50
.15466	.25200	2.42164	138.75
.16806	.24562	2.35619	135.00
.18128	.23863	2.29074	131.25
.19428	.23103	2.22529	127.50
.20704	.22282	2.15984	123.75
.21954	.21398	2.09440	120.00
.23174	.20451	2.02895	116.25
.24364	.19441	1.96350	112.50
.25520	.18368	1.89805	108.75
.26639	.17232	1.83260	105.00
.27717	.16031	1.76715	101.25
.28751	.14764	1.70170	97.50
.29734	.13431	1.63625	93.75
.30662	.12029	1.57080	90.00
.31528	.10559	1.50535	86.25
.32327	.09019	1.43990	82.50
.33053	.07412	1.37445	78.75
.33698	.05736	1.30900	75.00
.34258	.03994	1.24355	71.25
.34723	.02186	1.17810	67.50
.35082	.00312	1.11265	63.75
.35323	-.01628	1.04720	60.00
.35429	-.03632	.98175	56.25
.35379	-.05702	.91630	52.50
.35152	-.07834	.85085	48.75
.34721	-.10024	.78540	45.00
.34056	-.12267	.71995	41.25
.33124	-.14553	.65450	37.50
.31886	-.16869	.58905	33.75
.30293	-.19197	.52360	30.00
.28292	-.21511	.45815	26.25
.25822	-.23772	.39270	22.50
.22823	-.25927	.32725	18.75
.19253	-.27901	.26180	15.00
.15102	-.29602	.19635	11.25
.10419	-.30924	.13090	7.50
.05323	-.31767	.06545	3.75
.00000	-.32057	.00000	.00

29

-.32057

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax	Ay	DIST.	ANGLE
‡1/6	‡1/6	‡K	DEGREES
.00000	.28507	3.14159	180.00
.01433	.28480	3.07614	176.25
.02865	.28399	3.01069	172.50
.04294	.28264	2.94524	168.75
.05720	.28075	2.87979	165.00
.07140	.27832	2.81434	161.25
.08553	.27534	2.74889	157.50
.09959	.27181	2.68344	153.75
.11354	.26771	2.61799	150.00
.12738	.26305	2.55254	146.25
.14109	.25781	2.48709	142.50
.15465	.25199	2.42164	138.75
.16805	.24559	2.35619	135.00
.18126	.23859	2.29074	131.25
.19426	.23101	2.22529	127.50
.20703	.22281	2.15984	123.75
.21955	.21399	2.09440	120.00
.23177	.20455	2.02895	116.25
.24368	.19446	1.96350	112.50
.25523	.18372	1.89805	108.75
.26640	.17234	1.83260	105.00
.27716	.16030	1.76715	101.25
.28747	.14761	1.70170	97.50
.29729	.13426	1.63625	93.75
.30657	.12025	1.57080	90.00
.31526	.10557	1.50535	86.25
.32328	.09020	1.43990	82.50
.33057	.07415	1.37445	78.75
.33706	.05741	1.30900	75.00
.34265	.03998	1.24355	71.25
.34727	.02188	1.17810	67.50
.35082	.00312	1.11265	63.75
.35318	-.01630	1.04720	60.00
.35421	-.03636	.98175	56.25
.35371	-.05705	.91630	52.50
.35146	-.07836	.85085	48.75
.34719	-.10025	.78540	45.00
.34060	-.12266	.71995	41.25
.33131	-.14552	.65450	37.50
.31894	-.16868	.58905	33.75
.30300	-.19197	.52360	30.00
.28295	-.21511	.45815	26.25
.25820	-.23773	.39270	22.50
.22819	-.25926	.32725	18.75
.19249	-.27900	.26180	15.00
.15100	-.29601	.19635	11.25
.10419	-.30923	.13090	7.50
.05324	-.31767	.06545	3.75
.00000	-.32058	.00000	.00

21 -.32058

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.23256	.00000	3.14159	180.00
-.23219	.01442	3.07614	176.25
-.23110	.02883	3.01069	172.50
-.22929	.04319	2.94524	168.75
-.22674	.05750	2.87979	165.00
-.22347	.07173	2.81434	161.25
-.21947	.08586	2.74889	157.50
-.21473	.09988	2.68344	153.75
-.20925	.11375	2.61799	150.00
-.20303	.12746	2.55254	146.25
-.19605	.14098	2.48709	142.50
-.18832	.15430	2.42164	138.75
-.17983	.16738	2.35619	135.00
-.17059	.18020	2.29074	131.25
-.16057	.19274	2.22529	127.50
-.14977	.20496	2.15984	123.75
-.13819	.21683	2.09440	120.00
-.12581	.22832	2.02895	116.25
-.11262	.23938	1.96350	112.50
-.09861	.24999	1.89805	108.75
-.08379	.26009	1.83260	105.00
-.06814	.26966	1.76715	101.25
-.05165	.27865	1.70170	97.50
-.03431	.28702	1.63625	93.75
-.01611	.29470	1.57080	90.00
.00296	.30165	1.50535	86.25
.02290	.30778	1.43990	82.50
.04373	.31301	1.37445	78.75
.06545	.31728	1.30900	75.00
.08805	.32049	1.24355	71.25
.11155	.32257	1.17810	67.50
.13593	.32344	1.11265	63.75
.16119	.32297	1.04720	60.00
.18733	.32105	.98175	56.25
.21429	.31753	.91630	52.50
.24204	.31224	.85085	48.75
.27048	.30498	.78540	45.00
.29950	.29556	.71995	41.25
.32894	.28377	.65450	37.50
.35861	.26939	.58905	33.75
.38822	.25218	.52360	30.00
.41739	.23191	.45815	26.25
.44561	.20836	.39270	22.50
.47215	.18133	.32725	18.75
.49612	.15075	.26180	15.00
.51647	.11676	.19635	11.25
.53207	.07976	.13090	7.50
.54191	.04049	.06545	3.75
.54527	.00000	.00000	.00

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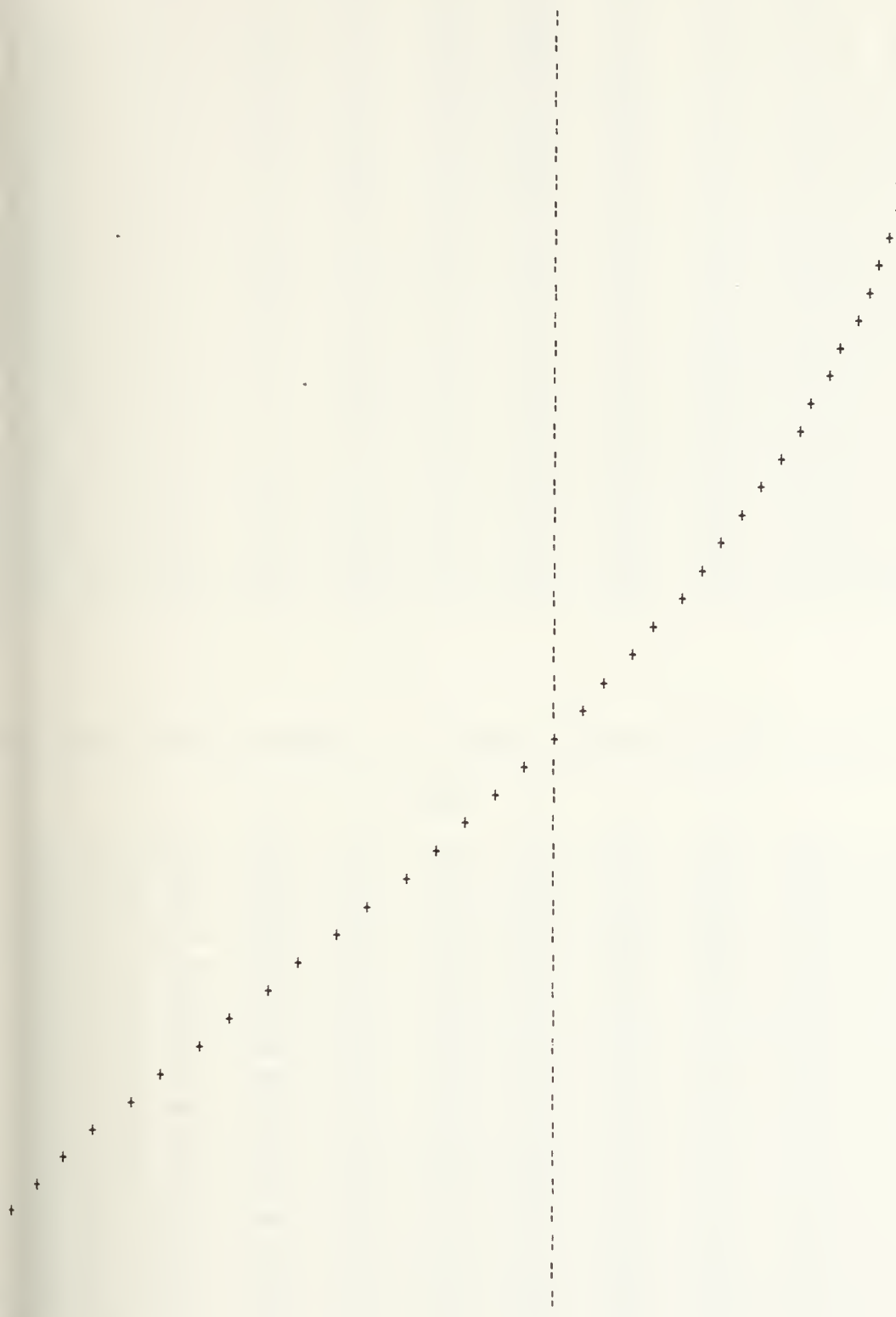
-.23256

WATER SURFACE ELEVATION

.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



ELEV.VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.27336	2.96158	3.14159	180.00
-.27299	2.89988	3.07614	176.25
-.27190	2.83818	3.01069	172.50
-.27008	2.77648	2.94524	168.75
-.26752	2.71478	2.87979	165.00
-.26422	2.65308	2.81434	161.25
-.26019	2.59138	2.74889	157.50
-.25542	2.52968	2.68344	153.75
-.24993	2.46798	2.61799	150.00
-.24371	2.40628	2.55254	146.25
-.23676	2.34458	2.48709	142.50
-.22907	2.28288	2.42164	138.75
-.22062	2.22118	2.35619	135.00
-.21141	2.15948	2.29074	131.25
-.20143	2.09778	2.22529	127.50
-.19069	2.03609	2.15984	123.75
-.17921	1.97439	2.09440	120.00
-.16698	1.91269	2.02895	116.25
-.15402	1.85099	1.96350	112.50
-.14033	1.78929	1.89805	108.75
-.12589	1.72759	1.83260	105.00
-.11067	1.66589	1.76715	101.25
-.09466	1.60419	1.70170	97.50
-.07786	1.54249	1.63625	93.75
-.06027	1.48079	1.57080	90.00
-.04192	1.41909	1.50535	86.25
-.02284	1.35739	1.43990	82.50
-.00307	1.29569	1.37445	78.75
.01739	1.23399	1.30900	75.00
.03853	1.17229	1.24355	71.25
.06036	1.11059	1.17810	67.50
.08289	1.04889	1.11265	63.75
.10610	.98719	1.04720	60.00
.12995	.92549	.98175	56.25
.15436	.86379	.91630	52.50
.17921	.80209	.85085	48.75
.20436	.74039	.78540	45.00
.22967	.67870	.71995	41.25
.25499	.61700	.65450	37.50
.28014	.55530	.58905	33.75
.30491	.49360	.52360	30.00
.32900	.43190	.45815	26.25
.35199	.37020	.39270	22.50
.37331	.30850	.32725	18.75
.39227	.24680	.26180	15.00
.40812	.18510	.19635	11.25
.42011	.12340	.13090	7.50
.42759	.06170	.06545	3.75
.43013	.00000	.00000	.00

TION VS DEPTH, THETA= [illegible] DEGREES, [illegible]

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.39227	.49612	.15075	.19249	-.27900	-.00005	.2461397	.1924889	.7837433	.6129115	.0000000	.0000000	.0000000	.0000000
.25960	.42921	.12746	.15899	-.27363	.09584	.1842207	.1589886	.5621435	.4851487	.0285485	.0233157	.0892811	.0728412
.12693	.37211	.10846	.13255	-.25983	.19306	.1384629	.1325476	.4041450	.3868794	.0499541	.0426551	.1533810	.1306883
-.00575	.32319	.09274	.11137	-.24172	.29243	.1044511	.1113723	.2910136	.3102970	.0660681	.0588359	.1994953	.1769364
-.13842	.28115	.07958	.09420	-.22173	.39435	.0790481	.0941961	.2097502	.2499445	.0782408	.0724725	.2327141	.2141007
-.27109	.24495	.06848	.08011	-.20133	.49896	.0599992	.0801114	.1512445	.2019431	.0874647	.0840354	.2566611	.2440772
-.40376	.21370	.05906	.06846	-.18140	.60625	.0456675	.0684567	.1090589	.1634819	.0944742	.0938909	.2739287	.2683181
-.53644	.18670	.05100	.05874	-.16244	.71613	.0348552	.0587403	.0786135	.1324849	.0998158	.1023286	.2863781	.2879515
-.66911	.16334	.04408	.05059	-.14472	.82844	.0266791	.0505905	.0566333	.1073915	.1038977	.1095812	.2953499	.3038640
-.80178	.14312	.03812	.04372	-.12836	.94301	.0204845	.0437216	.0407660	.0870098	.1070264	.1158376	.3018110	.3167598
-.93445	.12563	.03296	.03791	-.11337	1.05966	.0157837	.0379109	.0293170	.0704163	.1094323	.1212527	.3064601	.3272029
-1.06713	.11051	.02847	.03298	-.09973	1.17821	.0122119	.0329827	.0210624	.0568866	.1112894	.1259556	.3098020	.3356477
-1.19980	.09744	.02456	.02880	-.08735	1.29849	.0094951	.0287966	.0151169	.0458462	.1127294	.1300538	.3122020	.3424626
-1.33247	.08618	.02113	.02524	-.07615	1.42033	.0074273	.0252397	.0108394	.0368348	.1138519	.1336383	.3139239	.3479473
-1.46514	.07650	.01811	.02222	-.06601	1.54358	.0058530	.0222207	.0077653	.0294807	.1147329	.1367867	.3151580	.3523465
-1.59782	.06823	.01545	.01966	-.05682	1.66812	.0046548	.0196648	.0055581	.0234808	.1154299	.1395652	.3160419	.3558597
-1.73049	.06119	.01308	.01751	-.04848	1.79381	.0037440	.0175112	.0039738	.0185860	.1159871	.1420313	.3166742	.3586503
-1.86316	.05526	.01096	.01571	-.04088	1.92057	.0030533	.0157101	.0028357	.0145901	.1164380	.1442351	.3171259	.3608510
-1.99583	.05032	.00904	.01422	-.03391	2.04828	.0025324	.0142209	.0020158	.0113204	.1168085	.1462206	.3174477	.3625698
-2.12851	.04629	.00729	.01301	-.02747	2.17689	.0021430	.0130110	.0014216	.0086310	.1171187	.1480271	.3176757	.3638933
-2.26118	.04309	.00568	.01205	-.02146	2.30632	.0018569	.0120541	.0009854	.0063970	.1173840	.1496898	.3178354	.3648903
-2.39385	.04066	.00417	.01133	-.01580	2.43652	.0016533	.0113299	.0006581	.0045095	.1176169	.1512410	.3179444	.3656137
-2.52652	.03896	.00274	.01082	-.01040	2.56746	.0015176	.0108231	.0004027	.0028719	.1178272	.1527105	.3180148	.3661034
-2.65920	.03795	.00136	.01052	-.00516	2.69910	.0014399	.0105232	.0001910	.0013961	.1180234	.1541266	.3180542	.3663865
-2.79187	.03761	.00000	.01042	.00000	2.83143	.0014146	.0104239	.0000000	.0000000	.1182127	.1555161	.3180668	.3664791

TION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30491	.38822	.25218	.30300	-.19197	.00012	.1507133	.3029964	.4667260	.9383135	.0000000	.0000000	.0000000	.0000000
.17588	.34009	.21657	.25749	-.19654	.10397	.1156617	.2574920	.3432547	.7641717	.0171855	.0361606	.0522569	.1098380
.04685	.29801	.18661	.21957	-.19254	.20783	.0888088	.2195670	.2521030	.6232883	.0303772	.0669387	.0906672	.1993518
-.08218	.26125	.16121	.18789	-.18343	.31257	.0682515	.1878859	.1849401	.5091112	.0405101	.0932260	.1188636	.2724100
-.21122	.22916	.13956	.16132	-.17147	.41868	.0525133	.1613217	.1355184	.4163151	.0483014	.1157556	.1395384	.3321150
-.34025	.20114	.12102	.13896	-.15811	.52644	.0404592	.1389556	.0991904	.3406660	.0542997	.1351284	.1546809	.3809526
-.46928	.17670	.10506	.12005	-.14432	.63596	.0312212	.1200478	.0725138	.2788213	.0589242	.1518383	.1657586	.4209196
-.59831	.15536	.09127	.10401	-.13067	.74726	.0241366	.1040051	.0529449	.2281407	.0624957	.1662934	.1738528	.4536269
-.72735	.13675	.07933	.09035	-.11754	.86029	.0186997	.0903505	.0386060	.1865304	.0652593	.1788325	.1797593	.4803800
-.85638	.12052	.06894	.07870	-.10513	.97496	.0145248	.0786988	.0281125	.1523207	.0674029	.1897389	.1840637	.5022414
-.98541	.10638	.05988	.06874	-.09355	1.09119	.0113171	.0687378	.0204438	.1241718	.0690701	.1992510	.1871964	.5200796
-1.11444	.09408	.05195	.06021	-.08285	1.20885	.0088514	.0602123	.0148475	.1010015	.0703713	.2075703	.1894733	.5346070
-1.24348	.08340	.04498	.05291	-.07300	1.32783	.0069556	.0529132	.0107700	.0819303	.0713911	.2148688	.1911260	.5464091
-1.37251	.07415	.03885	.04667	-.06398	1.44804	.0054979	.0466684	.0078034	.0662392	.0721945	.2212934	.1923243	.5559684
-1.50154	.06616	.03342	.04134	-.05573	1.56935	.0043773	.0413355	.0056481	.0533363	.0728316	.2269711	.1931921	.5636830
-1.63057	.05930	.02859	.03680	-.04819	1.69169	.0035166	.0367967	.0040838	.0427318	.0733409	.2320119	.1938200	.5698809
-1.75961	.05345	.02427	.03295	-.04127	1.81496	.0028566	.0329544	.0029488	.0340176	.0737521	.2365120	.1942737	.5748325
-1.88864	.04850	.02038	.02973	-.03492	1.93908	.0023521	.0297280	.0021245	.0268512	.0740881	.2405560	.1946010	.5787595
2.01767	.04437	.01685	.02705	-.02905	2.06399	.0019687	.0270511	.0015242	.0209428	.0743669	.2442192	.1948364	.5818430
-2.14671	.04099	.01361	.02487	-.02359	2.18963	.0016802	.0248696	.0010840	.0160449	.0746023	.2475689	.1950047	.5842293
-2.27574	.03830	.01062	.02314	-.01847	2.31595	.0014669	.0231401	.0007571	.0119433	.0748053	.2506663	.1951235	.5860350
-2.40477	.03625	.00781	.02183	-.01362	2.44292	.0013143	.0218286	.0005088	.0084498	.0749848	.2535675	.1952051	.5873507
-2.53380	.03482	.00513	.02091	-.00897	2.57049	.0012122	.0209094	.0003128	.0053960	.0751478	.2563248	.1952581	.5882440
-2.66284	.03396	.00254	.02036	-.00445	2.69866	.0011536	.0203650	.0001488	.0026277	.0753004	.2589877	.1952879	.5887617
-2.79187	.03368	.00000	.02018	.00000	2.82741	.0011345	.0201846	.0000000	.0000000	.0754480	.2616038	.1952975	.5889312

TEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

PTH: FINITE, HEIGHT/DEPTH= .2520

VE HEIGHT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

URRENT CRITERION: EULER , MAGNITUDE= .00

LUTION OF ORDER 10 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

ATER DEPTH	2.7919
AVE HEIGHT	.70349
AVE PERIOD	5.9232
AVE SPEED	1.0608
EAN EULERIAN FLUID SPEED	6.19785E-22
EAN MASS TRANSPORT SPEED	1.99769E-02
EAN FLUID SPEED RELATIVE TO WAVE	1.0608
OLUME FLUX DUE TO WAVES	5.57728E-02
ERNOULLI CONSTANT	.56301

UTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.43013	.54527	.00000	.00000	-.32058	.00000	.2973221	.0000000	.9579716	.0000000	.0000000	.0000000	.0000000	.0000000
.29588	.46879	.00000	.00000	-.30872	.09189	.2197594	.0000000	.6785620	.0000000	.0347091	.0000000	.1098523	.0000000
.16163	.40437	.00000	.00000	-.28947	.18594	.1635139	.0000000	.4829380	.0000000	.0604363	.0000000	.1878180	.0000000
.02738	.34973	.00000	.00000	-.26678	.28282	.1223082	.0000000	.3448173	.0000000	.0796221	.0000000	.2433810	.0000000
-.10687	.30313	.00000	.00000	-.24295	.38285	.0918866	.0000000	.2467154	.0000000	.0939999	.0000000	.2830876	.0000000
-.24112	.26323	.00000	.00000	-.21932	.48608	.0692916	.0000000	.1767455	.0000000	.1048190	.0000000	.3115124	.0000000
-.37537	.22898	.00000	.00000	-.19666	.59242	.0524299	.0000000	.1266968	.0000000	.1129896	.0000000	.3318810	.0000000
-.50962	.19950	.00000	.00000	-.17538	.70172	.0397987	.0000000	.0908305	.0000000	.1191804	.0000000	.3464825	.0000000
-.64387	.17409	.00000	.00000	-.15569	.81376	.0303072	.0000000	.0650998	.0000000	.1238863	.0000000	.3569493	.0000000
-.77812	.15217	.00000	.00000	-.13766	.92834	.0231569	.0000000	.0466322	.0000000	.1274750	.0000000	.3644493	.0000000
-.91237	.13326	.00000	.00000	-.12125	1.04523	.0177592	.0000000	.0333784	.0000000	.1302215	.0000000	.3698201	.0000000
-1.04662	.11695	.00000	.00000	-.10639	1.16422	.0136777	.0000000	.0238709	.0000000	.1323317	.0000000	.3736629	.0000000
-1.18087	.10289	.00000	.00000	-.09297	1.28510	.0105873	.0000000	.0170561	.0000000	.1339605	.0000000	.3764102	.0000000
-1.31512	.09080	.00000	.00000	-.08088	1.40769	.0082452	.0000000	.0121761	.0000000	.1352246	.0000000	.3783724	.0000000
-1.44937	.08043	.00000	.00000	-.06998	1.53183	.0064693	.0000000	.0086850	.0000000	.1362124	.0000000	.3797727	.0000000
-1.58362	.07157	.00000	.00000	-.06014	1.65736	.0051229	.0000000	.0061897	.0000000	.1369905	.0000000	.3807711	.0000000
-1.71787	.06406	.00000	.00000	-.05123	1.78414	.0041031	.0000000	.0044067	.0000000	.1376098	.0000000	.3814824	.0000000
-1.85212	.05773	.00000	.00000	-.04314	1.91206	.0033325	.0000000	.0031317	.0000000	.1381089	.0000000	.3819884	.0000000
-1.98637	.05247	.00000	.00000	-.03574	2.04103	.0027531	.0000000	.0022176	.0000000	.1385174	.0000000	.3823475	.0000000
-2.12062	.04818	.00000	.00000	-.02893	2.17094	.0023213	.0000000	.0015581	.0000000	.1388580	.0000000	.3826010	.0000000
-2.25487	.04478	.00000	.00000	-.02258	2.30174	.0020048	.0000000	.0010766	.0000000	.1391484	.0000000	.3827778	.0000000
-2.38912	.04219	.00000	.00000	-.01662	2.43336	.0017802	.0000000	.0007170	.0000000	.1394025	.0000000	.3828982	.0000000
-2.52337	.04038	.00000	.00000	-.01093	2.56576	.0016306	.0000000	.0004378	.0000000	.1396314	.0000000	.3829757	.0000000
-2.65762	.03931	.00000	.00000	-.00542	2.69892	.0015451	.0000000	.0002074	.0000000	.1398446	.0000000	.3830190	.0000000
-2.79187	.03895	.00000	.00000	.00000	2.83281	.0015173	.0000000	.0000000	.0000000	.1400501	.0000000	.3830330	.0000000

EADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

)TH: FINITE, HEIGHT/DEPTH= .2520

.E HEIGHT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

RRENT CRITERION: EULER , MAGNITUDE= .00

5UTION OF ORDER 12 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

TER DEPTH	2.7919
VE HEIGHT	.70349
VE PERIOD	5.9232
VE SPEED	1.0608
AN EULERIAN FLUID SPEED	-3.27483E-22
AN MASS TRANSPORT SPEED	1.99768E-02
AN FLUID SPEED RELATIVE TO WAVE	1.0608
LUME FLUX DUE TO WAVES	5.57726E-02
RNOULLI CONSTANT	.56301

5UTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.43013	.54527	.00000	.00000	-.32058	.00000	.2973220	.0000000	.9579713	.0000000	.0000000	.0000000	.0000000	.0000000
.29588	.46878	.00000	.00000	-.30872	.09189	.2197590	.0000000	.6785609	.0000000	.0347091	.0000000	.1098522	.0000000
.16163	.40437	.00000	.00000	-.28947	.18594	.1635136	.0000000	.4829374	.0000000	.0604362	.0000000	.1878178	.0000000
.02738	.34973	.00000	.00000	-.26678	.28282	.1223081	.0000000	.3448171	.0000000	.0796220	.0000000	.2433808	.0000000
-.10687	.30313	.00000	.00000	-.24295	.38285	.0918866	.0000000	.2467153	.0000000	.0939998	.0000000	.2830874	.0000000
-.24112	.26323	.00000	.00000	-.21932	.48608	.0692916	.0000000	.1767455	.0000000	.1048189	.0000000	.3115122	.0000000
-.37537	.22898	.00000	.00000	-.19666	.59242	.0524299	.0000000	.1266968	.0000000	.1129895	.0000000	.3318807	.0000000
-.50962	.19950	.00000	.00000	-.17538	.70172	.0397987	.0000000	.0908305	.0000000	.1191803	.0000000	.3464823	.0000000
-.64387	.17409	.00000	.00000	-.15569	.81376	.0303072	.0000000	.0650998	.0000000	.1238862	.0000000	.3569491	.0000000
-.77812	.15217	.00000	.00000	-.13766	.92834	.0231569	.0000000	.0466323	.0000000	.1274749	.0000000	.3644491	.0000000
-.91237	.13326	.00000	.00000	-.12125	1.04523	.0177592	.0000000	.0333784	.0000000	.1302214	.0000000	.3698198	.0000000
-1.04662	.11695	.00000	.00000	-.10639	1.16422	.0136777	.0000000	.0238709	.0000000	.1323316	.0000000	.3736627	.0000000
-1.18087	.10289	.00000	.00000	-.09297	1.28510	.0105873	.0000000	.0170561	.0000000	.1339604	.0000000	.3764099	.0000000
-1.31512	.09080	.00000	.00000	-.08088	1.40769	.0082452	.0000000	.0121761	.0000000	.1352246	.0000000	.3783721	.0000000
-1.44937	.08043	.00000	.00000	-.06998	1.53183	.0064693	.0000000	.0086850	.0000000	.1362123	.0000000	.3797724	.0000000
-1.58362	.07157	.00000	.00000	-.06014	1.65736	.0051229	.0000000	.0061897	.0000000	.1369904	.0000000	.3807709	.0000000
-1.71787	.06406	.00000	.00000	-.05123	1.78414	.0041031	.0000000	.0044067	.0000000	.1376097	.0000000	.3814822	.0000000
-1.85212	.05773	.00000	.00000	-.04314	1.91207	.0033325	.0000000	.0031317	.0000000	.1381088	.0000000	.3819882	.0000000
-1.98637	.05247	.00000	.00000	-.03574	2.04103	.0027531	.0000000	.0022176	.0000000	.1385173	.0000000	.3823473	.0000000
-2.12062	.04818	.00000	.00000	-.02893	2.17094	.0023213	.0000000	.0015581	.0000000	.1388579	.0000000	.3826007	.0000000
-2.25487	.04478	.00000	.00000	-.02258	2.30174	.0020048	.0000000	.0010766	.0000000	.1391483	.0000000	.3827776	.0000000
-2.38912	.04219	.00000	.00000	-.01662	2.43336	.0017802	.0000000	.0007170	.0000000	.1394024	.0000000	.3828980	.0000000
-2.52337	.04038	.00000	.00000	-.01093	2.56576	.0016306	.0000000	.0004378	.0000000	.1396313	.0000000	.3829755	.0000000
-2.65762	.03931	.00000	.00000	-.00542	2.69892	.0015451	.0000000	.0002074	.0000000	.1398445	.0000000	.3830188	.0000000
-2.79187	.03895	.00000	.00000	.00000	2.83281	.0015173	.0000000	.0000000	.0000000	.1400501	.0000000	.3830327	.0000000

TION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

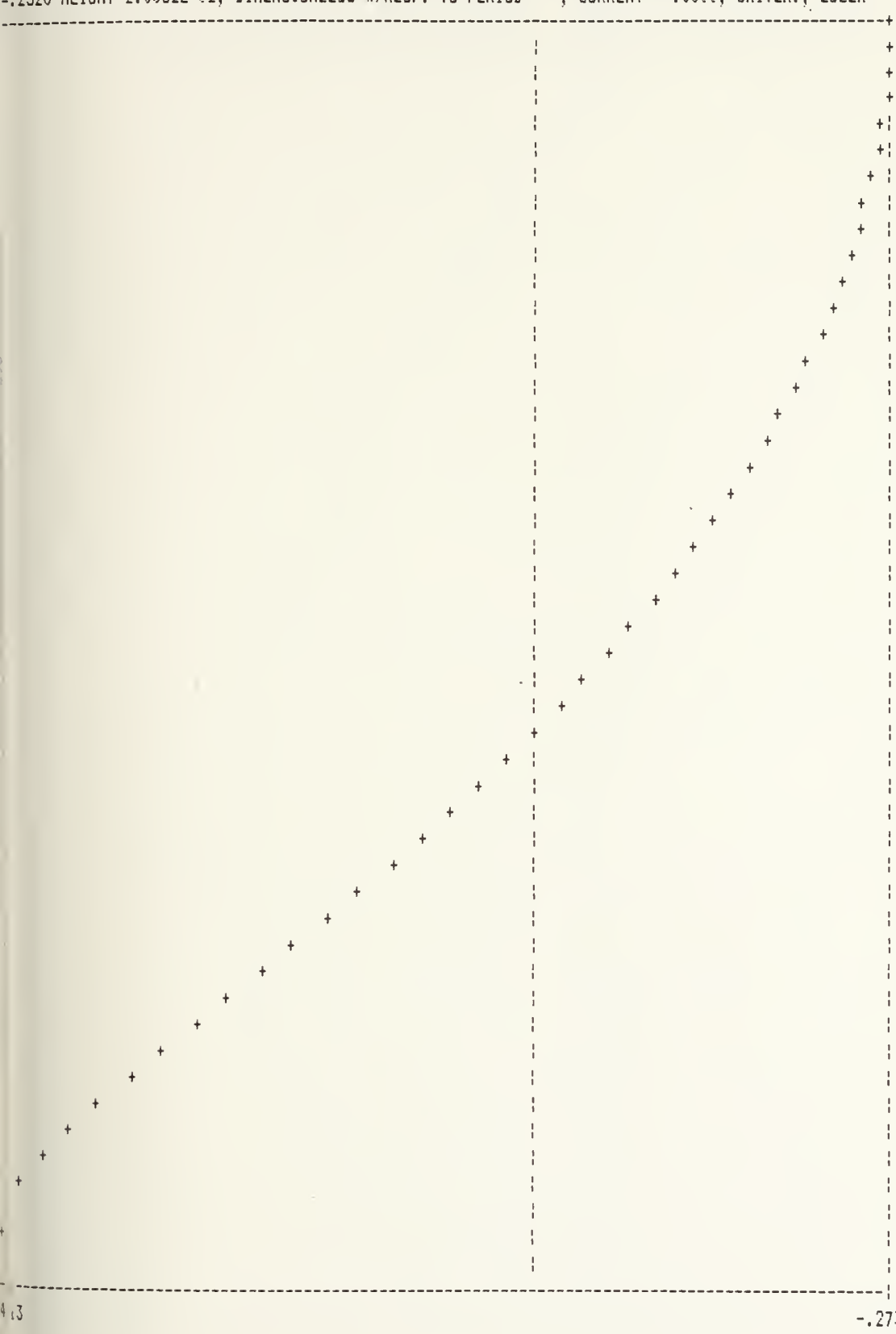
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.39221	.49609	.15074	.19246	-.27900	.00000	.2461021	.1924635	.7836069	.6128178	.0000000	.0000000	.0000000	.0000000
.25954	.42918	.12745	.15897	-.27362	.09589	.1841946	.1589715	.5620521	.4850863	.0285437	.0233124	.0892641	.0728293
.12687	.37208	.10845	.13254	-.25982	.19311	.1384446	.1325354	.4040828	.3868355	.0499459	.0426495	.1533525	.1306681
-.00580	.32317	.09273	.11136	-.24171	.29247	.1044381	.1113632	.2909711	.3102651	.0660575	.0588284	.1994588	.1769102
-.13847	.28114	.07958	.09419	-.22172	.39439	.0790388	.0941891	.2097211	.2499209	.0782284	.0724637	.2326722	.2140700
-.27114	.24493	.06848	.08011	-.20132	.49900	.0599925	.0801061	.1512246	.2019254	.0874510	.0840256	.2566154	.2440432
-.40381	.21369	.05905	.06845	-.18139	.60629	.0456628	.0684526	.1090452	.1634685	.0944596	.0938802	.2738804	.2682815
-.53648	.18669	.05100	.05874	-.16243	.71617	.0348518	.0587371	.0786043	.1324747	.0998006	.1023173	.2863281	.2879129
-.66915	.16333	.04408	.05059	-.14471	.82848	.0266767	.0505879	.0566270	.1073838	.1038820	.1095694	.2952987	.3038239
-.80182	.14312	.03812	.04372	-.12835	.94305	.0204828	.0437196	.0407617	.0870039	.1070104	.1158252	.3017589	.3167186
-.93449	.12563	.03295	.03791	-.11337	1.05970	.0157825	.0379093	.0293141	.0704118	.1094160	.1212401	.3064074	.3271607
.06716	.11050	.02847	.03298	-.09972	1.17825	.0122110	.0329814	.0210604	.0568832	.1112730	.1259426	.3097490	.3356048
.19983	.09744	.02456	.02880	-.08735	1.29852	.0094945	.0287956	.0151156	.0458436	.1127128	.1300406	.3121487	.3424192
.33250	.08618	.02113	.02524	-.07614	1.42036	.0074269	.0252390	.0108385	.0368329	.1138353	.1336249	.3138704	.3479035
.46517	.07650	.01811	.02222	-.06600	1.54361	.0058527	.0222201	.0077648	.0294793	.1147162	.1367731	.3151044	.3523023
.59784	.06822	.01545	.01966	-.05682	1.66814	.0046546	.0196643	.0055577	.0234797	.1154132	.1395515	.3159882	.3558154
.73051	.06119	.01308	.01751	-.04848	1.79384	.0037438	.0175108	.0039735	.0185852	.1159703	.1420175	.3166204	.3586057
.86318	.05526	.01095	.01571	-.04088	1.92058	.0030533	.0157098	.0028355	.0145895	.1164212	.1442212	.3170721	.3608064
.99585	.05032	.00904	.01422	-.03391	2.04830	.0025323	.0142208	.0020158	.0113200	.1167917	.1462067	.3173939	.3625251
.12852	.04629	.00729	.01301	-.02747	2.17690	.0021429	.0130109	.0014215	.0086308	.1171018	.1480131	.3176219	.3638485
.26119	.04309	.00568	.01205	-.02146	2.30633	.0018569	.0120540	.0009854	.0063968	.1173671	.1496757	.3177816	.3648454
.39386	.04066	.00417	.01133	-.01580	2.43653	.0016533	.0113299	.0006580	.0045094	.1176000	.1512269	.3178906	.3655688
.52653	.03896	.00274	.01082	-.01040	2.56747	.0015176	.0108231	.0004027	.0028718	.1178103	.1526964	.3179610	.3660584
.65920	.03795	.00136	.01052	-.00516	2.69911	.0014399	.0105232	.0001910	.0013961	.1180065	.1541124	.3180003	.3663416
.79187	.03761	.00000	.01042	.00000	2.83143	.0014146	.0104239	.0000000	.0000000	.1181959	.1555020	.3180130	.3664342

ION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30507	.38828	.25223	.30306	-.19196	.00000	.1507619	.3030577	.4669001	.9385504	.0000000	.0000000	.0000000	.0000000
.17603	.34014	.21661	.25754	-.19655	.10386	.1156971	.2575400	.3433770	.7643523	.0171918	.0361695	.0522787	.1098704
.04699	.29805	.18664	.21960	-.19255	.20772	.0888347	.2196049	.2521890	.6234273	.0303881	.0669546	.0907043	.1994093
.08205	.26129	.16124	.18792	-.18344	.31246	.0682704	.1879161	.1850005	.5092187	.0405244	.0932477	.1189116	.2724870
.21109	.22919	.13958	.16135	-.17148	.41858	.0525270	.1613459	.1355607	.4163983	.0483182	.1157819	.1395940	.3322074
.34013	.20117	.12103	.13897	-.15813	.52634	.0404692	.1389749	.0992199	.3407306	.0543183	.1351585	.1547419	.3810570
.46917	.17672	.10507	.12006	-.14433	.63587	.0312284	.1200634	.0725343	.2788714	.0589442	.1518715	.1658234	.4210334
.59820	.15538	.09128	.10402	-.13068	.74716	.0241418	.1040176	.0529590	.2281796	.0625166	.1663291	.1739202	.4537481
.72724	.13676	.07934	.09036	-.11755	.86020	.0187035	.0903605	.0386158	.1865604	.0652810	.1788703	.1798286	.4805069
.85628	.12053	.06895	.07871	-.10514	.97488	.0145275	.0787069	.0281192	.1523439	.0674251	.1897784	.1841343	.5023728
.98532	.10639	.05988	.06874	-.09356	1.09110	.0113190	.0687442	.0204483	.1241896	.0690927	.1992919	.1872678	.5202146
.11436	.09409	.05195	.06022	-.08285	1.20877	.0088528	.0602174	.0148506	.1010151	.0703941	.2076124	.1895453	.5347447
.24340	.08341	.04499	.05292	-.07301	1.32776	.0069566	.0529173	.0107721	.0819407	.0714142	.2149118	.1911985	.5465489
.37244	.07415	.03885	.04667	-.06399	1.44797	.0054986	.0466716	.0078048	.0662470	.0722178	.2213372	.1923970	.5561099
.50148	.06616	.03342	.04134	-.05574	1.56929	.0043778	.0413380	.0056490	.0533421	.0728550	.2270155	.1932651	.5638258
.63052	.05930	.02859	.03680	-.04819	1.69163	.0035169	.0367986	.0040844	.0427361	.0733643	.2320569	.1938931	.5700247
.75956	.05345	.02427	.03296	-.04128	1.81491	.0028568	.0329558	.0029491	.0340207	.0737756	.2365574	.1943469	.5749770
.88859	.04850	.02038	.02973	-.03492	1.93904	.0023523	.0297290	.0021248	.0268534	.0741116	.2406018	.1946742	.5789046
2.01763	.04437	.01685	.02705	-.02905	2.06395	.0019688	.0270518	.0015243	.0209444	.0743904	.2442653	.1949097	.5819885
2.14667	.04099	.01362	.02487	-.02359	2.18960	.0016802	.0248701	.0010841	.0160461	.0746259	.2476152	.1950780	.5843751
2.27571	.03830	.01062	.02314	-.01847	2.31593	.0014669	.0231404	.0007571	.0119441	.0748289	.2507129	.1951968	.5861810
2.40475	.03625	.00781	.02183	-.01362	2.44290	.0013143	.0218287	.0005088	.0084503	.0750084	.2536142	.1952784	.5874968
2.53379	.03482	.00513	.02091	-.00897	2.57048	.0012122	.0209095	.0003128	.0053963	.0751714	.2563717	.1953314	.5883902
2.66283	.03396	.00254	.02036	-.00445	2.69865	.0011536	.0203650	.0001489	.0026279	.0753240	.2590347	.1953612	.5889079
2.79187	.03368	.00000	.02018	.00000	2.82741	.0011345	.0201846	.0000000	.0000000	.0754716	.2616509	.1953708	.5890774

WATER SURFACE ELEVATION

=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

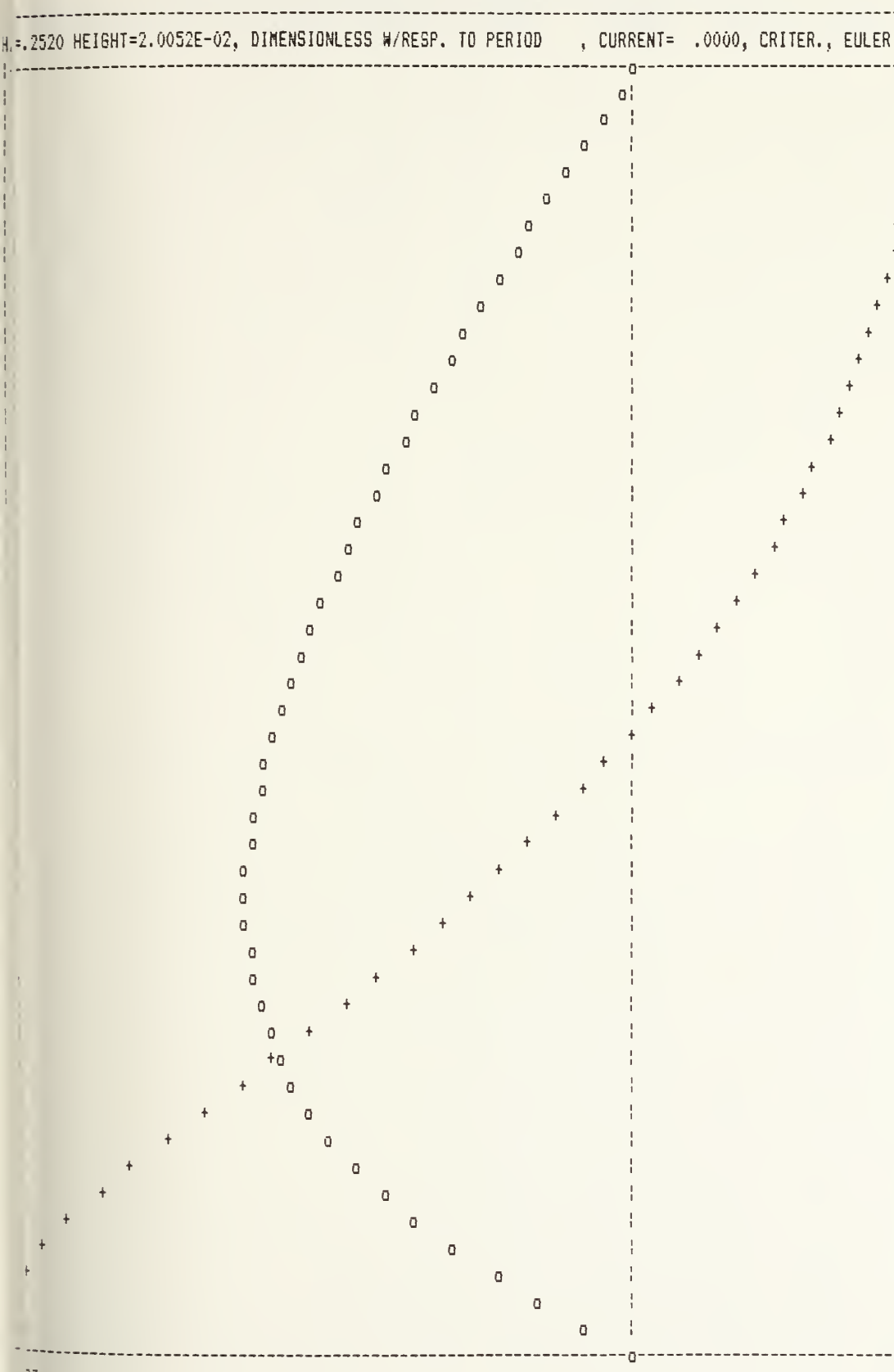


ELEV.VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.27336	2.96158	3.14159	180.00
-.27299	2.89988	3.07614	176.25
-.27190	2.83818	3.01069	172.50
-.27007	2.77648	2.94524	168.75
-.26751	2.71478	2.87979	165.00
-.26422	2.65308	2.81434	161.25
-.26019	2.59138	2.74889	157.50
-.25544	2.52968	2.68344	153.75
-.24995	2.46798	2.61799	150.00
-.24373	2.40628	2.55254	146.25
-.23676	2.34458	2.48709	142.50
-.22904	2.28288	2.42164	138.75
-.22058	2.22118	2.35619	135.00
-.21136	2.15948	2.29074	131.25
-.20140	2.09778	2.22529	127.50
-.19070	2.03609	2.15984	123.75
-.17926	1.97439	2.09440	120.00
-.16706	1.91269	2.02895	116.25
-.15409	1.85099	1.96350	112.50
-.14035	1.78929	1.89805	108.75
-.12585	1.72759	1.83260	105.00
-.11058	1.66589	1.76715	101.25
-.09455	1.60419	1.70170	97.50
-.07778	1.54249	1.63625	93.75
-.06027	1.48079	1.57080	90.00
-.04200	1.41909	1.50535	86.25
-.02298	1.35739	1.43990	82.50
-.00319	1.29569	1.37445	78.75
.01733	1.23399	1.30900	75.00
.03857	1.17229	1.24355	71.25
.06049	1.11059	1.17810	67.50
.08305	1.04889	1.11265	63.75
.10622	.98719	1.04720	60.00
.12998	.92549	.98175	56.25
.15427	.86379	.91630	52.50
.17905	.80209	.85085	48.75
.20419	.74039	.78540	45.00
.22957	.67870	.71995	41.25
.25500	.61700	.65450	37.50
.28025	.55530	.58905	33.75
.30507	.49360	.52360	30.00
.32914	.43190	.45815	26.25
.35206	.37020	.39270	22.50
.37329	.30850	.32725	18.75
.39221	.24680	.26180	15.00
.40805	.18510	.19635	11.25
.42006	.12340	.13090	7.50
.42757	.06170	.06545	3.75
.43013	.00000	.00000	.00

-.27336

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

H.=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.23256	.00000	3.14159	180.00
-.23219	.01442	3.07614	176.25
-.23110	.02883	3.01069	172.50
-.22929	.04319	2.94524	168.75
-.22675	.05750	2.87979	165.00
-.22347	.07173	2.81434	161.25
-.21947	.08586	2.74889	157.50
-.21473	.09987	2.68344	153.75
-.20925	.11375	2.61799	150.00
-.20302	.12746	2.55254	146.25
-.19605	.14098	2.48709	142.50
-.18832	.15430	2.42164	138.75
-.17984	.16738	2.35619	135.00
-.17059	.18021	2.29074	131.25
-.16057	.19274	2.22529	127.50
-.14977	.20496	2.15984	123.75
-.13818	.21682	2.09440	120.00
-.12580	.22830	2.02895	116.25
-.11261	.23937	1.96350	112.50
-.09861	.24998	1.89805	108.75
-.08379	.26010	1.83260	105.00
-.06814	.26968	1.76715	101.25
-.05165	.27868	1.70170	97.50
-.03431	.28704	1.63625	93.75
-.01611	.29470	1.57080	90.00
.00296	.30162	1.50535	86.25
.02290	.30773	1.43990	82.50
.04373	.31297	1.37445	78.75
.06544	.31726	1.30900	75.00
.08806	.32051	1.24355	71.25
.11156	.32262	1.17810	67.50
.13595	.32349	1.11265	63.75
.16121	.32301	1.04720	60.00
.18733	.32106	.98175	56.25
.21428	.31750	.91630	52.50
.24200	.31218	.85085	48.75
.27044	.30492	.78540	45.00
.29947	.29553	.71995	41.25
.32895	.28377	.65450	37.50
.35865	.26942	.58905	33.75
.38828	.25223	.52360	30.00
.41745	.23195	.45815	26.25
.44564	.20837	.39270	22.50
.47214	.18132	.32725	18.75
.49609	.15074	.26180	15.00
.51642	.11675	.19635	11.25
.53204	.07975	.13090	7.50
.54190	.04049	.06545	3.75
.54527	.00000	.00000	.00

.27 -.23256

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

Ax	Ay	DIST.	ANGLE
%1/G	%1/G	%K	DEGREES
.00000	.28507	3.14159	180.00
.01433	.28480	3.07614	176.25
.02865	.28399	3.01069	172.50
.04294	.28265	2.94524	168.75
.05720	.28076	2.87979	165.00
.07140	.27832	2.81434	161.25
.08553	.27534	2.74889	157.50
.09958	.27180	2.68344	153.75
.11354	.26771	2.61799	150.00
.12738	.26304	2.55254	146.25
.14109	.25781	2.48709	142.50
.15466	.25200	2.42164	138.75
.16806	.24560	2.35619	135.00
.18127	.23861	2.29074	131.25
.19427	.23101	2.22529	127.50
.20703	.22281	2.15984	123.75
.21954	.21398	2.09440	120.00
.23176	.20453	2.02895	116.25
.24366	.19444	1.96350	112.50
.25522	.18371	1.89805	108.75
.26641	.17235	1.83260	105.00
.27718	.16032	1.76715	101.25
.28750	.14763	1.70170	97.50
.29731	.13428	1.63625	93.75
.30657	.12025	1.57080	90.00
.31523	.10555	1.50535	86.25
.32324	.09017	1.43990	82.50
.33053	.07412	1.37445	78.75
.33704	.05739	1.30900	75.00
.34267	.03999	1.24355	71.25
.34732	.02191	1.17810	67.50
.35088	.00315	1.11265	63.75
.35323	-.01628	1.04720	60.00
.35422	-.03635	.98175	56.25
.35367	-.05706	.91630	52.50
.35139	-.07838	.85085	48.75
.34713	-.10027	.78540	45.00
.34056	-.12267	.71995	41.25
.33132	-.14552	.65450	37.50
.31898	-.16868	.58905	33.75
.30306	-.19196	.52360	30.00
.28300	-.21511	.45815	26.25
.25822	-.23773	.39270	22.50
.22818	-.25927	.32725	18.75
.19246	-.27900	.26180	15.00
.15098	-.29600	.19635	11.25
.10419	-.30923	.13090	7.50
.05324	-.31767	.06545	3.75
.00000	-.32058	.00000	.00

EADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

D TH: FINITE, HEIGHT/DEPTH= .2520

E HEIGHT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

RRENT CRITERION: EULER , MAGNITUDE= .14

S UTION OF ORDER 12 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

TER DEPTH	2.3783
VE HEIGHT	.59927
VE PERIOD	5.4669
VE SPEED	1.1493
AN EULERIAN FLUID SPEED	.11053
AN MASS TRANSPORT SPEED	.12830
AN FLUID SPEED RELATIVE TO WAVE	1.0388
LUME FLUX DUE TO WAVES	4.22546E-02
RNOULLI CONSTANT	.54021

SUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.35486	.54046	.00000	.00000	-.28075	.00000	.2920994	.0000000	.7983493	.0000000	.0000000	.0000000	.0000000	.0000000
.24098	.49131	.00000	.00000	-.26554	.08275	.2413875	.0000000	.6322571	.0000000	.0303770	.0000000	.0814594	.0000000
.12709	.44825	.00000	.00000	-.24818	.16736	.2009246	.0000000	.5033926	.0000000	.0555625	.0000000	.1461239	.0000000
.01321	.41043	.00000	.00000	-.22986	.25402	.1684556	.0000000	.4028616	.0000000	.0765951	.0000000	.1977264	.0000000
-.10067	.37718	.00000	.00000	-.21138	.34278	.1422654	.0000000	.3240264	.0000000	.0942877	.0000000	.2391158	.0000000
-.21455	.34790	.00000	.00000	-.19324	.43362	.1210376	.0000000	.2618936	.0000000	.1092803	.0000000	.2724783	.0000000
-.32843	.32211	.00000	.00000	-.17580	.52650	.1037542	.0000000	.2126812	.0000000	.1220801	.0000000	.2995009	.0000000
-.44231	.29937	.00000	.00000	-.15923	.62131	.0896229	.0000000	.1735078	.0000000	.1330911	.0000000	.3214906	.0000000
-.55619	.27933	.00000	.00000	-.14366	.71796	.0780236	.0000000	.1421665	.0000000	.1426370	.0000000	.3394653	.0000000
-.67007	.26167	.00000	.00000	-.12911	.81632	.0684686	.0000000	.1169591	.0000000	.1509783	.0000000	.3542200	.0000000
-.78395	.24611	.00000	.00000	-.11560	.91627	.0605724	.0000000	.0965725	.0000000	.1583259	.0000000	.3663786	.0000000
-.89783	.23244	.00000	.00000	-.10308	1.01771	.0540292	.0000000	.0799877	.0000000	.1648514	.0000000	.3764320	.0000000
-1.01172	.22044	.00000	.00000	-.09152	1.12052	.0485958	.0000000	.0664097	.0000000	.1706949	.0000000	.3847680	.0000000
-1.12560	.20995	.00000	.00000	-.08083	1.22460	.0440780	.0000000	.0552161	.0000000	.1759718	.0000000	.3916934	.0000000
-1.23948	.20080	.00000	.00000	-.07096	1.32984	.0403205	.0000000	.0459173	.0000000	.1807775	.0000000	.3974520	.0000000
-1.35336	.19287	.00000	.00000	-.06181	1.43617	.0371986	.0000000	.0381259	.0000000	.1851915	.0000000	.4022375	.0000000
-1.46724	.18604	.00000	.00000	-.05333	1.54350	.0346127	.0000000	.0315338	.0000000	.1892805	.0000000	.4062039	.0000000
-1.58112	.18023	.00000	.00000	-.04543	1.65176	.0324829	.0000000	.0258943	.0000000	.1931009	.0000000	.4094739	.0000000
1.69500	.17534	.00000	.00000	-.03802	1.76090	.0307454	.0000000	.0210079	.0000000	.1967012	.0000000	.4121445	.0000000
-1.80888	.17132	.00000	.00000	-.03105	1.87085	.0293499	.0000000	.0167120	.0000000	.2001230	.0000000	.4142923	.0000000
-1.92276	.16810	.00000	.00000	-.02442	1.98157	.0282566	.0000000	.0128716	.0000000	.2034032	.0000000	.4159768	.0000000
-2.03664	.16564	.00000	.00000	-.01807	2.09304	.0274355	.0000000	.0093731	.0000000	.2065743	.0000000	.4172435	.0000000
2.15052	.16390	.00000	.00000	-.01193	2.20521	.0268642	.0000000	.0061186	.0000000	.2096662	.0000000	.4181256	.0000000
2.26441	.16287	.00000	.00000	-.00593	2.31808	.0265273	.0000000	.0030210	.0000000	.2127063	.0000000	.4186460	.0000000
-2.37829	.16253	.00000	.00000	.00000	2.43162	.0264160	.0000000	.0000000	.0000000	.2157209	.0000000	.4188180	.0000000

)TION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.33011	.51139	.11513	.13447	-.25492	.00000	.2615240	.1344661	.7083104	.3641872	.0000000	.0000000	.0000000	.0000000
.21726	.46651	.10104	.11681	-.24283	.08473	.2176338	.1168108	.5648784	.3031878	.0270364	.0141783	.0718395	.0376566
.10441	.42701	.08885	.10183	-.22826	.17099	.1823341	.1018258	.4526800	.2528026	.0496046	.0265148	.1292552	.0690283
-.00844	.39218	.07825	.08904	-.21241	.25896	.1538089	.0890390	.3645033	.2110087	.0685714	.0372844	.1753647	.0951988
-.12129	.36146	.06899	.07808	-.19611	.34876	.1306545	.0780773	.2948866	.1762201	.0846222	.0467139	.2125707	.1170481
-.23414	.33433	.06088	.06864	-.17990	.44040	.1117794	.0686431	.2396714	.1471808	.0983015	.0549926	.2427330	.1352960
-.34699	.31037	.05374	.06050	-.16415	.53384	.0963305	.0604970	.1956757	.1228872	.1100441	.0622793	.2672975	.1505345
-.45984	.28920	.04744	.05344	-.14907	.62902	.0836373	.0534444	.1604537	.1025302	.1201988	.0687084	.2873920	.1632537
-.57269	.27050	.04187	.04733	-.13481	.72586	.0731710	.0473261	.1321173	.0854519	.1290467	.0743944	.3039003	.1738606
-.68554	.25399	.03693	.04201	-.12142	.82426	.0645125	.0420109	.1092033	.0711137	.1368154	.0794352	.3175168	.1826948
-.79839	.23943	.03254	.03739	-.10892	.92412	.0573287	.0373895	.0905734	.0590716	.1436903	.0839154	.3287892	.1900405
-.91124	.22661	.02861	.03337	-.09729	1.02535	.0513537	.0333713	.0753383	.0489572	.1498227	.0879080	.3381507	.1961360
1.02409	.21535	.02510	.02988	-.08651	1.12783	.0463749	.0298799	.0628008	.0404633	.1553370	.0914770	.3459452	.2011815
1.13694	.20548	.02194	.02685	-.07652	1.23149	.0422218	.0268515	.0524119	.0333320	.1603361	.0946780	.3524461	.2053454
1.24979	.19687	.01909	.02423	-.06726	1.33623	.0387572	.0242320	.0437374	.0273458	.1649053	.0975604	.3578713	.2087692
1.36264	.18940	.01651	.02198	-.05866	1.44198	.0358709	.0219763	.0364322	.0223202	.1691162	.1001677	.3623948	.2115716
1.47549	.18296	.01415	.02005	-.05066	1.54867	.0334742	.0200462	.0302205	.0180977	.1730290	.1025388	.3661557	.2138521
1.58834	.17747	.01199	.01841	-.04319	1.65623	.0314959	.0184096	.0248801	.0145427	.1766949	.1047087	.3692648	.2156939
1.70119	.17286	.00999	.01704	-.03618	1.76461	.0298789	.0170401	.0202309	.0115378	.1801580	.1067089	.3718102	.2171654
1.81404	.16905	.00813	.01592	-.02956	1.87375	.0285778	.0159156	.0161250	.0089804	.1834564	.1085685	.3738615	.2183232
1.92689	.16600	.00637	.01502	-.02326	1.98362	.0275572	.0150185	.0124393	.0067794	.1866238	.1103139	.3754733	.2192124
2.03974	.16368	.00471	.01433	-.01723	2.09419	.0267898	.0143347	.0090697	.0048530	.1896903	.1119702	.3766869	.2198688
2.15259	.16203	.00310	.01385	-.01138	2.20543	.0262553	.0138537	.0059258	.0031268	.1926834	.1135607	.3775330	.2203190
2.26544	.16106	.00154	.01357	-.00566	2.31732	.0259400	.0135680	.0029273	.0015311	.1956285	.1151080	.3780326	.2205819
2.37829	.16074	.00000	.01347	.00000	2.42985	.0258358	.0134732	.0000000	.0000000	.1985500	.1166338	.3781977	.2206683

)TION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.26720	.43888	.20324	.23131	-.19144	.00000	.1926171	.2313065	.5095651	.6119172	.0000000	.0000000	.0000000	.0000000
.15697	.40401	.17955	.20320	-.18620	.08938	.1632262	.2032012	.4138199	.5151667	.0196120	.0239476	.0508916	.0621183
.04674	.37299	.15882	.17886	-.17797	.17952	.1391235	.1788614	.3373780	.4337436	.0362758	.0450046	.0922933	.1144168
-.06349	.34540	.14060	.15774	-.16791	.27067	.1193003	.1577419	.2761561	.3651404	.0505186	.0635563	.1261078	.1584467
-.17372	.32086	.12455	.13938	-.15684	.36299	.1029481	.1393806	.2269563	.3072741	.0627677	.0799319	.1538364	.1955063
-.28395	.29903	.11037	.12339	-.14532	.45657	.0894183	.1233883	.1872724	.2584171	.0733698	.0944142	.1766663	.2266839
-.39417	.27963	.09782	.10944	-.13376	.55142	.0781901	.1094372	.1551380	.2171357	.0826074	.1072462	.1955380	.2528936
-.50440	.26238	.08668	.09725	-.12242	.64753	.0688449	.0972511	.1290073	.1822373	.0907111	.1186377	.2111984	.2749047
-.61463	.24707	.07677	.08660	-.11146	.74487	.0610453	.0865968	.1076629	.1527269	.0978699	.1287703	.2242423	.2933660
-.72486	.23349	.06793	.07728	-.10100	.84339	.0545193	.0772770	.0901437	.1277718	.1042392	.1378021	.2351443	.3088255
-.83509	.22147	.06002	.06912	-.09110	.94304	.0490468	.0691245	.0756890	.1066728	.1099471	.1458709	.2442840	.3217467
-.94532	.21083	.05293	.06200	-.08178	1.04374	.0444496	.0619974	.0636950	.0888403	.1151001	.1530976	.2519660	.3325223
1.05555	.20145	.04655	.05577	-.07305	1.14545	.0405832	.0557746	.0536810	.0737754	.1197866	.1595885	.2584351	.3414847
1.16577	.19321	.04079	.05035	-.06487	1.24808	.0373299	.0503535	.0452630	.0610543	.1240808	.1654377	.2638884	.3489157
1.27600	.18600	.03557	.04565	-.05722	1.35158	.0345943	.0456464	.0381327	.0503153	.1280448	.1707286	.2684846	.3550538
1.38623	.17972	.03082	.04158	-.05007	1.45590	.0322986	.0415788	.0320420	.0412485	.1317316	.1755360	.2723523	.3601003
1.49646	.17430	.02647	.03809	-.04337	1.56098	.0303797	.0380876	.0267896	.0335867	.1351860	.1799267	.2755947	.3642247
1.60669	.16967	.02246	.03512	-.03706	1.66678	.0287863	.0351196	.0222114	.0270982	.1384469	.1839615	.2782954	.3675693
1.71692	.16576	.01874	.03263	-.03112	1.77326	.0274771	.0326300	.0181725	.0215805	.1415478	.1876955	.2805211	.3702522
1.82714	.16254	.01527	.03058	-.02547	1.88037	.0264189	.0305819	.0145606	.0168549	.1445182	.1911793	.2823252	.3723706
1.93737	.15996	.01199	.02895	-.02007	1.98809	.0255858	.0289451	.0112811	.0127623	.1473844	.1944601	.2837494	.3740029
2.04760	.15798	.00886	.02770	-.01488	2.09639	.0249573	.0276960	.0082530	.0091586	.1501701	.1975818	.2848260	.3752111
2.15783	.15658	.00584	.02682	-.00984	2.20526	.0245187	.0268163	.0054053	.0059118	.1528969	.2005862	.2855788	.3760417
2.26806	.15575	.00290	.02629	-.00489	2.31468	.0242596	.0262935	.0026741	.0028983	.1555853	.2035133	.2860241	.3765272
2.37829	.15548	.00000	.02612	.00000	2.42464	.0241739	.0261200	.0000000	.0000000	.1582547	.2064021	.2861715	.3766870

WATER SURFACE ELEVATION

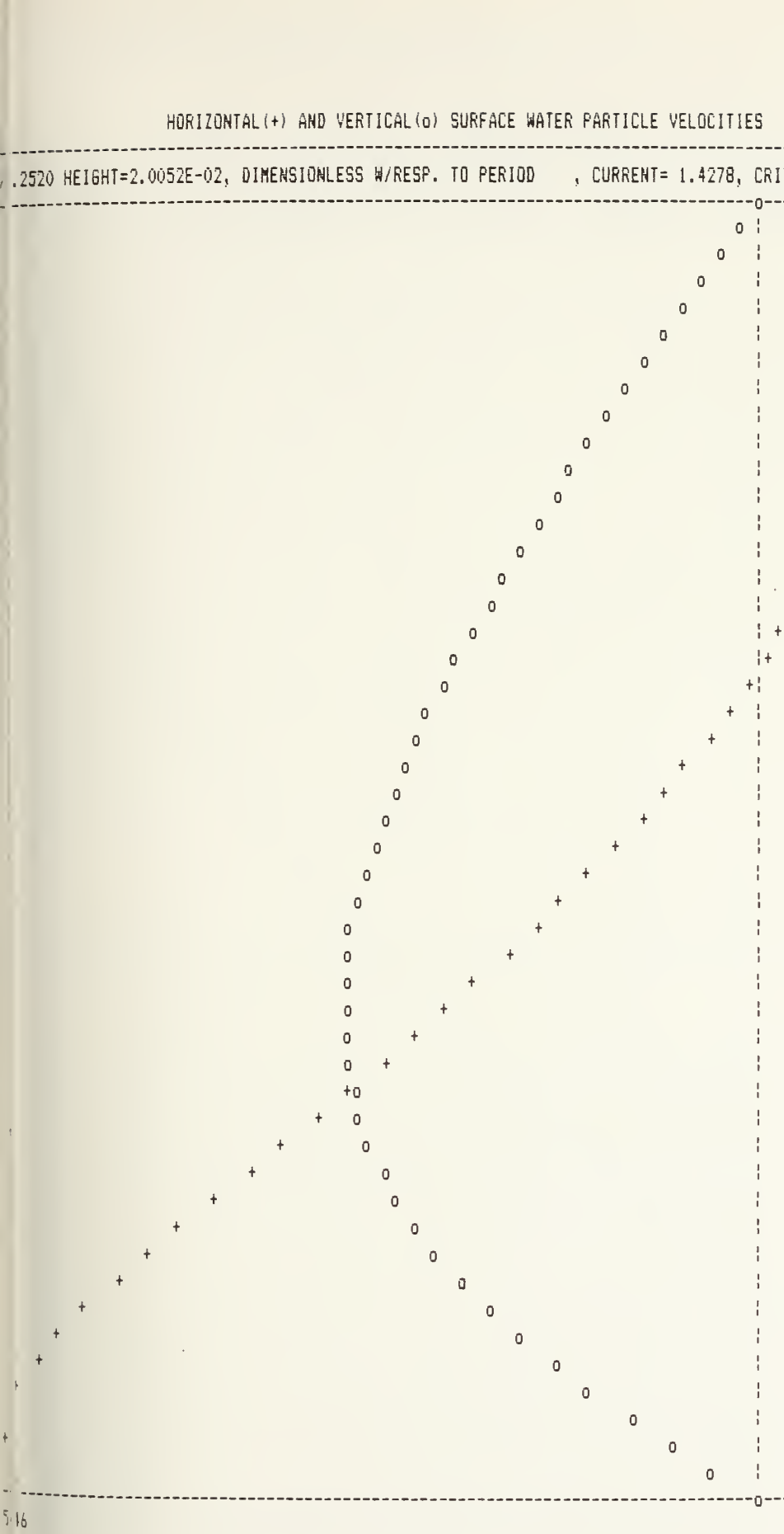
.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= 1.4278, CRITER., EULER

ELEV.VS. ‡K	TIME (K‡G)^.5	DIST. ‡K	ANGLE DEGREES
-.24442	2.73343	3.14159	180.00
-.24407	2.67648	3.07614	176.25
-.24305	2.61954	3.01069	172.50
-.24134	2.56259	2.94524	168.75
-.23894	2.50564	2.87979	165.00
-.23585	2.44870	2.81434	161.25
-.23208	2.39175	2.74889	157.50
-.22763	2.33480	2.68344	153.75
-.22248	2.27786	2.61799	150.00
-.21665	2.22091	2.55254	146.25
-.21012	2.16397	2.48709	142.50
-.20290	2.10702	2.42164	138.75
-.19499	2.05007	2.35619	135.00
-.18639	1.99313	2.29074	131.25
-.17710	1.93618	2.22529	127.50
-.16711	1.87923	2.15984	123.75
-.15644	1.82229	2.09440	120.00
-.14507	1.76534	2.02895	116.25
-.13301	1.70839	1.96350	112.50
-.12027	1.65145	1.89805	108.75
-.10684	1.59450	1.83260	105.00
-.09273	1.53755	1.76715	101.25
-.07796	1.48061	1.70170	97.50
-.06252	1.42366	1.63625	93.75
-.04644	1.36671	1.57080	90.00
-.02972	1.30977	1.50535	86.25
-.01239	1.25282	1.43990	82.50
.00555	1.19588	1.37445	78.75
.02405	1.13893	1.30900	75.00
.04309	1.08198	1.24355	71.25
.06262	1.02504	1.17810	67.50
.08260	.96809	1.11265	63.75
.10296	.91114	1.04720	60.00
.12364	.85420	.98175	56.25
.14454	.79725	.91630	52.50
.16557	.74030	.85085	48.75
.18659	.68336	.78540	45.00
.20746	.62641	.71995	41.25
.22800	.56946	.65450	37.50
.24799	.51252	.58905	33.75
.26720	.45557	.52360	30.00
.28533	.39863	.45815	26.25
.30210	.34168	.39270	22.50
.31714	.28473	.32725	18.75
.33011	.22779	.26180	15.00
.34065	.17084	.19635	11.25
.34845	.11389	.13090	7.50
.35324	.05695	.06545	3.75
.35486	.00000	.00000	.00

-.24442

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= 1.4278, CRITER., EULER

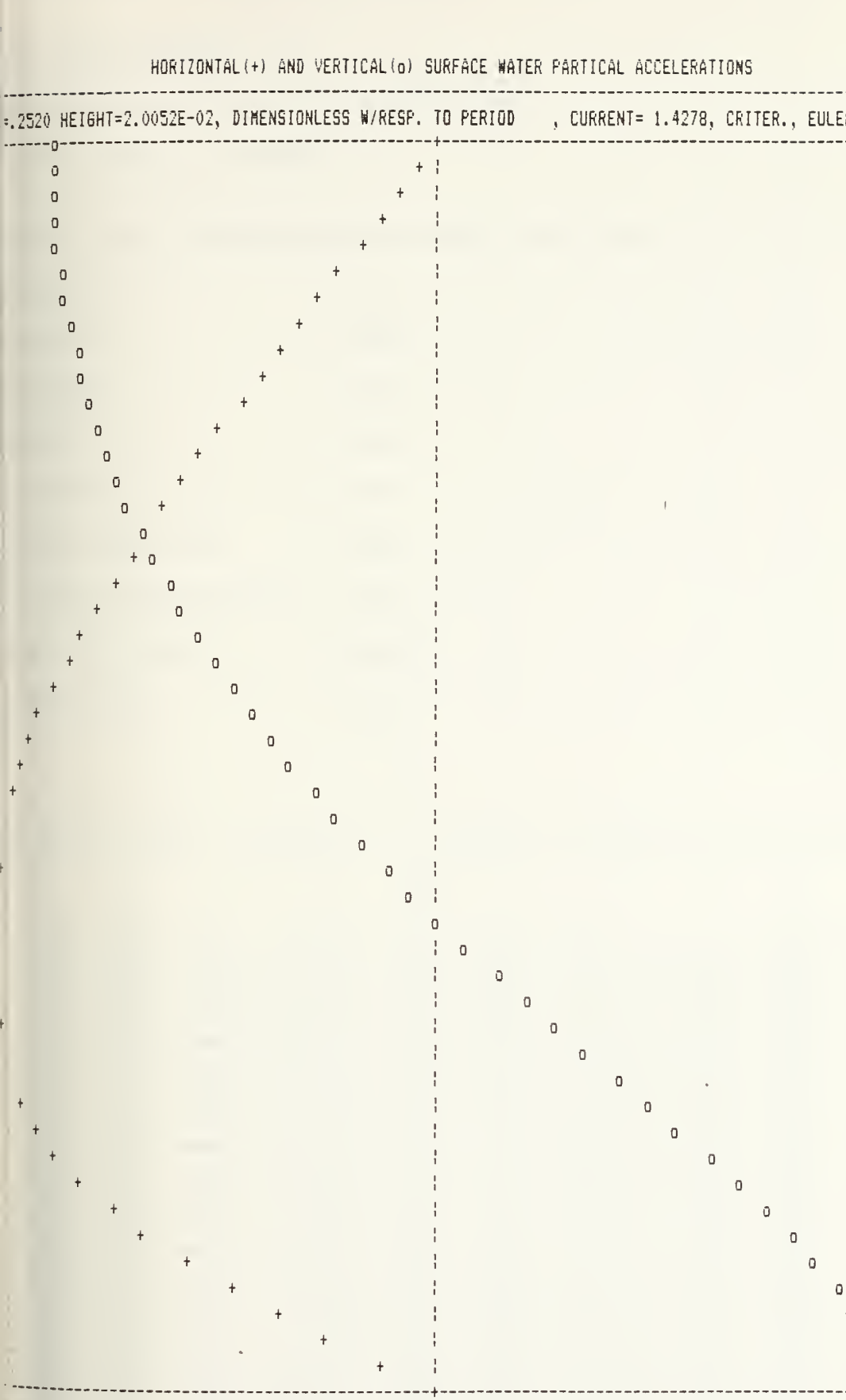


U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.10338	.00000	3.14159	180.00
-.10304	.01310	3.07614	176.25
-.10201	.02618	3.01069	172.50
-.10030	.03923	2.94524	168.75
-.09790	.05222	2.87979	165.00
-.09482	.06514	2.81434	161.25
-.09105	.07796	2.74889	157.50
-.08658	.09067	2.68344	153.75
-.08142	.10325	2.61799	150.00
-.07556	.11566	2.55254	146.25
-.06900	.12790	2.48709	142.50
-.06173	.13993	2.42164	138.75
-.05375	.15173	2.35619	135.00
-.04506	.16327	2.29074	131.25
-.03565	.17453	2.22529	127.50
-.02552	.18546	2.15984	123.75
-.01466	.19605	2.09440	120.00
-.00308	.20625	2.02895	116.25
.00925	.21603	1.96350	112.50
.02230	.22534	1.89805	108.75
.03610	.23415	1.83260	105.00
.05063	.24241	1.76715	101.25
.06590	.25006	1.70170	97.50
.08190	.25707	1.63625	93.75
.09863	.26336	1.57080	90.00
.11609	.26888	1.50535	86.25
.13426	.27357	1.43990	82.50
.15313	.27736	1.37445	78.75
.17268	.28017	1.30900	75.00
.19289	.28192	1.24355	71.25
.21371	.28252	1.17810	67.50
.23512	.28189	1.11265	63.75
.25706	.27993	1.04720	60.00
.27945	.27653	.98175	56.25
.30222	.27159	.91630	52.50
.32527	.26499	.85085	48.75
.34846	.25662	.78540	45.00
.37163	.24637	.71995	41.25
.39459	.23412	.65450	37.50
.41710	.21977	.58905	33.75
.43888	.20324	.52360	30.00
.45960	.18448	.45815	26.25
.47888	.16349	.39270	22.50
.49629	.14033	.32725	18.75
.51139	.11513	.26180	15.00
.52374	.08812	.19635	11.25
.53290	.05963	.13090	7.50
.53855	.03009	.06545	3.75
.54046	.00000	.00000	.00

-.10338

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= 1.4278, CRITER., EULER



Ax %1/G	Ay %1/G	DIST. %K	ANGLE DEGREES
.00000	.25082	3.14159	180.00
.01308	.25058	3.07614	176.25
.02615	.24985	3.01069	172.50
.03920	.24863	2.94524	168.75
.05221	.24692	2.87979	165.00
.06517	.24471	2.81434	161.25
.07807	.24200	2.74889	157.50
.09088	.23878	2.68344	153.75
.10361	.23503	2.61799	150.00
.11622	.23075	2.55254	146.25
.12870	.22593	2.48709	142.50
.14103	.22056	2.42164	138.75
.15318	.21462	2.35619	135.00
.16515	.20810	2.29074	131.25
.17688	.20099	2.22529	127.50
.18837	.19328	2.15984	123.75
.19958	.18495	2.09440	120.00
.21047	.17600	2.02895	116.25
.22102	.16640	1.96350	112.50
.23117	.15616	1.89805	108.75
.24089	.14527	1.83260	105.00
.25013	.13371	1.76715	101.25
.25885	.12148	1.70170	97.50
.26698	.10859	1.63625	93.75
.27447	.09502	1.57080	90.00
.28126	.08079	1.50535	86.25
.28728	.06590	1.43990	82.50
.29244	.05037	1.37445	78.75
.29668	.03420	1.30900	75.00
.29989	.01742	1.24355	71.25
.30198	.00005	1.17810	67.50
.30284	-.01787	1.11265	63.75
.30234	-.03629	1.04720	60.00
.30036	-.05516	.98175	56.25
.29675	-.07442	.91630	52.50
.29135	-.09397	.85085	48.75
.28400	-.11371	.78540	45.00
.27450	-.13351	.71995	41.25
.26267	-.15321	.65450	37.50
.24833	-.17260	.58905	33.75
.23131	-.19144	.52360	30.00
.21145	-.20946	.45815	26.25
.18867	-.22630	.39270	22.50
.16297	-.24159	.32725	18.75
.13447	-.25492	.26180	15.00
.10341	-.26585	.19635	11.25
.07023	-.27401	.13090	7.50
.03551	-.27904	.06545	3.75
.00000	-.28075	.00000	.00

-.28075

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

EPTH: FINITE, HEIGHT/DEPTH= .2520

VE HEIGHT 2.005161E-02, DIMENSIONLESS WITH RESPECT TO PERIOD

URRENT CRITERION: EULER , MAGNITUDE= .29

LUTION OF ORDER 12 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

ATER DEPTH	2.0818
AVE HEIGHT	.52458
AVE PERIOD	5.1148
AVE SPEED	1.2284
EAN EULERIAN FLUID SPEED	.20683
EAN MASS TRANSPORT SPEED	.22276
EAN FLUID SPEED RELATIVE TO WAVE	1.0216
OLUME FLUX DUE TO WAVES	3.31649E-02
ERNOULLI CONSTANT	.52279

LUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30536	.56899	.00000	.00000	-.25057	.00000	.3237465	.0000000	.7728468	.0000000	.0000000	.0000000	.0000000	.0000000
.20589	.53326	.00000	.00000	-.23578	.07527	.2843701	.0000000	.6505623	.0000000	.0302436	.0000000	.0707908	.0000000
.10643	.50136	.00000	.00000	-.22032	.15205	.2513631	.0000000	.5500490	.0000000	.0568874	.0000000	.1305011	.0000000
.00696	.47285	.00000	.00000	-.20468	.23038	.2235872	.0000000	.4670284	.0000000	.0805082	.0000000	.1810837	.0000000
-.09251	.44736	.00000	.00000	-.18922	.31026	.2001281	.0000000	.3981210	.0000000	.1015810	.0000000	.2241104	.0000000
-.19197	.42456	.00000	.00000	-.17418	.39166	.1802479	.0000000	.3406442	.0000000	.1204983	.0000000	.2608517	.0000000
-.29144	.40416	.00000	.00000	-.15972	.47452	.1633486	.0000000	.2924589	.0000000	.1375865	.0000000	.2923379	.0000000
-.39091	.38593	.00000	.00000	-.14593	.55880	.1489430	.0000000	.2518524	.0000000	.1531178	.0000000	.3194083	.0000000
-.49037	.36964	.00000	.00000	-.13286	.64440	.1366333	.0000000	.2174471	.0000000	.1673204	.0000000	.3427481	.0000000
-.58984	.35510	.00000	.00000	-.12053	.73128	.1260932	.0000000	.1881309	.0000000	.1803867	.0000000	.3629189	.0000000
-.68931	.34213	.00000	.00000	-.10893	.81934	.1170545	.0000000	.1630022	.0000000	.1924792	.0000000	.3803819	.0000000
-.78877	.33060	.00000	.00000	-.09805	.90851	.1092960	.0000000	.1413268	.0000000	.2037364	.0000000	.3955171	.0000000
-.88824	.32037	.00000	.00000	-.08785	.99874	.1026347	.0000000	.1225047	.0000000	.2142764	.0000000	.4086383	.0000000
-.98771	.31132	.00000	.00000	-.07828	1.08995	.0969195	.0000000	.1060428	.0000000	.2242009	.0000000	.4200047	.0000000
-1.08717	.30336	.00000	.00000	-.06929	1.18208	.0920250	.0000000	.0915341	.0000000	.2335977	.0000000	.4298309	.0000000
-1.18664	.29639	.00000	.00000	-.06085	1.27508	.0878474	.0000000	.0786409	.0000000	.2425434	.0000000	.4382943	.0000000
-1.28611	.29035	.00000	.00000	-.05288	1.36890	.0843007	.0000000	.0670808	.0000000	.2511048	.0000000	.4455415	.0000000
-1.38557	.28516	.00000	.00000	-.04534	1.46348	.0813141	.0000000	.0566162	.0000000	.2593414	.0000000	.4516933	.0000000
-1.48504	.28077	.00000	.00000	-.03818	1.55880	.0788294	.0000000	.0470453	.0000000	.2673059	.0000000	.4568488	.0000000
-1.58451	.27713	.00000	.00000	-.03133	1.65481	.0767995	.0000000	.0381949	.0000000	.2750458	.0000000	.4610880	.0000000
-1.68397	.27420	.00000	.00000	-.02475	1.75149	.0751866	.0000000	.0299142	.0000000	.2826046	.0000000	.4644753	.0000000
-1.78344	.27196	.00000	.00000	-.01838	1.84881	.0739611	.0000000	.0220700	.0000000	.2900222	.0000000	.4670607	.0000000
-1.88291	.27037	.00000	.00000	-.01217	1.94676	.0731010	.0000000	.0145422	.0000000	.2973361	.0000000	.4688815	.0000000
-1.98237	.26943	.00000	.00000	-.00606	2.04532	.0725910	.0000000	.0072204	.0000000	.3045818	.0000000	.4699638	.0000000
-2.08184	.26911	.00000	.00000	.00000	2.14449	.0724220	.0000000	.0000000	.0000000	.3117938	.0000000	.4703229	.0000000

LUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

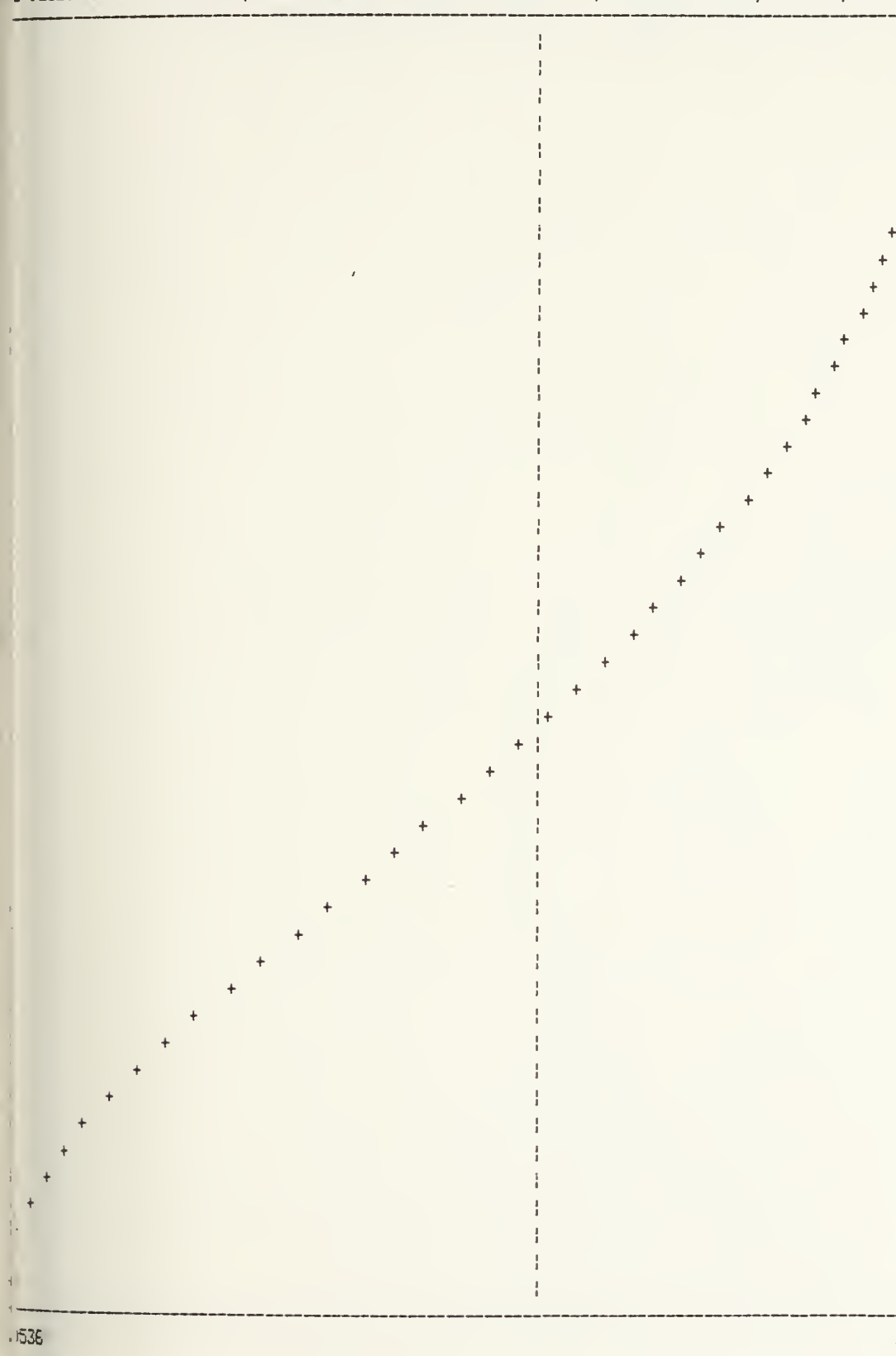
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.28630	.54739	.09576	.10818	-.23061	.00000	.2996374	.1081847	.7095827	.2561964	.0000000	.0000000	.0000000	.0000000
.18763	.51433	.08562	.09624	-.21794	.07653	.2645399	.0962445	.6003641	.2184235	.0278344	.0100858	.0646278	.0234159
.08895	.48474	.07661	.08579	-.20440	.15436	.2349706	.0857855	.5100726	.1862226	.0524783	.0190664	.1194125	.0433796
-.00972	.45823	.06858	.07660	-.19051	.23355	.2099715	.0766034	.4350864	.1587316	.0744301	.0270781	.1660431	.0603984
-.10839	.43447	.06141	.06853	-.17662	.31411	.1887665	.0685270	.3725209	.1352344	.0941023	.0342383	.2058874	.0749015
-.20706	.41319	.05499	.06141	-.16299	.39603	.1707243	.0614119	.3200698	.1151335	.1118382	.0406490	.2400572	.0872537
-.30574	.39412	.04923	.05514	-.14979	.47928	.1553298	.0551362	.2758818	.0979275	.1279245	.0463990	.2694591	.0977654
-.40441	.37704	.04405	.04960	-.13714	.56380	.1421611	.0495961	.2384655	.0831941	.1426016	.0515661	.2948351	.1067012
-.50308	.36176	.03938	.04470	-.12508	.64954	.1308716	.0447034	.2066147	.0705758	.1560719	.0562185	.3167936	.1142876
-.60175	.34810	.03516	.04038	-.11367	.73644	.1211756	.0403822	.1793503	.0597691	.1685070	.0604163	.3358357	.1207184
-.70042	.33591	.03134	.03657	-.10289	.82443	.1128372	.0365677	.1558748	.0505151	.1800523	.0642127	.3523744	.1261594
-.79910	.32506	.02787	.03320	-.09274	.91346	.1056609	.0332042	.1355356	.0425924	.1908322	.0676550	.3667515	.1307529
-.89777	.31541	.02471	.03024	-.08319	1.00345	.0994846	.0302437	.1177967	.0358107	.2009533	.0707852	.3792500	.1346211
-.99644	.30688	.02181	.02765	-.07421	1.09437	.0941737	.0276451	.1022158	.0300059	.2105076	.0736413	.3901046	.1378682
-1.09511	.29936	.01916	.02537	-.06577	1.18614	.0896162	.0253728	.0884264	.0250359	.2195751	.0762570	.3995101	.1405837
-1.19379	.29278	.01671	.02340	-.05780	1.27872	.0857189	.0233964	.0761228	.0207772	.2282255	.0786630	.4076284	.1428440
-1.29246	.28706	.01443	.02169	-.05028	1.37206	.0824048	.0216901	.0650486	.0171217	.2365201	.0808874	.4145932	.1447138
-1.39113	.28215	.01231	.02023	-.04314	1.46613	.0796099	.0202316	.0549871	.0139741	.2445133	.0829557	.4205153	.1462479
-1.48980	.27800	.01032	.01900	-.03635	1.56088	.0772817	.0190025	.0457534	.0112501	.2522537	.0848914	.4254855	.1474924
-1.58848	.27455	.00844	.01799	-.02985	1.65629	.0753776	.0179872	.0371884	.0088742	.2597853	.0867163	.4295775	.1484853
-1.68715	.27178	.00665	.01717	-.02359	1.75233	.0738632	.0171729	.0291530	.0067780	.2671483	.0884510	.4328506	.1492575
-1.78582	.26965	.00493	.01655	-.01752	1.84897	.0727118	.0165498	.0215239	.0048990	.2743798	.0901147	.4353508	.1498336
-1.88449	.26815	.00326	.01611	-.01160	1.94621	.0719032	.0161100	.0141897	.0031792	.2815145	.0917260	.4371127	.1502321
-1.98317	.26725	.00162	.01585	-.00578	2.04402	.0714236	.0158483	.0070475	.0015638	.2885857	.0933027	.4381605	.1504661
-2.08184	.26695	.00000	.01576	.00000	2.14241	.0712646	.0157614	.0000000	.0000000	.2956254	.0948622	.4385082	.1505433

UTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.23601	.49100	.17249	.19205	-.17896	.00000	.2410833	.1920506	.5587956	.4451451	.0000000	.0000000	.0000000	.0000000
.13944	.46460	.15486	.17197	-.17143	.07964	.2158525	.1719741	.4794679	.3820019	.0220648	.0175782	.0501363	.0399418
.04286	.44080	.13908	.15421	-.16264	.16008	.1943090	.1542066	.4128480	.3276426	.0418709	.0333291	.0932250	.0742095
-.05372	.41936	.12494	.13847	-.15309	.24141	.1758664	.1384680	.3566785	.2808299	.0597462	.0474619	.1303843	.1035918
-.15029	.40005	.11225	.12452	-.14317	.32368	.1600395	.1245151	.3091233	.2405063	.0759666	.0601610	.1625350	.1287664
-.24687	.38266	.10082	.11214	-.13314	.40691	.1464256	.1121368	.2686861	.2057674	.0907654	.0715886	.1904366	.1503163
-.34345	.36700	.09053	.10115	-.12320	.49111	.1346904	.1011505	.2341444	.1758389	.1043401	.0818879	.2147176	.1687436
-.44003	.35292	.08122	.09140	-.11349	.57626	.1245555	.0913973	.2044969	.1500572	.1168587	.0911858	.2358990	.1844807
-.53660	.34028	.07280	.08274	-.10409	.66234	.1157890	.0827397	.1789212	.1278522	.1284646	.0995946	.2544137	.1979005
-.63318	.32893	.06516	.07506	-.09506	.74930	.1081968	.0750580	.1567402	.1087334	.1392806	.1072144	.2706223	.2093249
-.72976	.31877	.05821	.06825	-.08644	.83712	.1016168	.0682485	.1373941	.0922775	.1494122	.1141345	.2848256	.2190314
-.82633	.30970	.05187	.06222	-.07823	.92575	.0959129	.0622210	.1204190	.0781187	.1589506	.1204347	.2972751	.2272596
-.92291	.30161	.04607	.05690	-.07044	1.01515	.0909711	.0568972	.1054288	.0659397	.1679750	.1261868	.3081809	.2342160
-1.01949	.29444	.04075	.05221	-.06305	1.10528	.0866956	.0522092	.0921010	.0554644	.1765542	.1314554	.3177194	.2400784
-1.11607	.28811	.03585	.04810	-.05604	1.19611	.0830061	.0480981	.0801650	.0464518	.1847489	.1362991	.3260379	.2449998
-1.21264	.28255	.03131	.04451	-.04939	1.28760	.0798352	.0445132	.0693923	.0386907	.1926123	.1407711	.3332598	.2491112
-1.30922	.27772	.02708	.04141	-.04306	1.37972	.0771264	.0414109	.0595892	.0319948	.2001917	.1449203	.3394881	.2525245
-1.40580	.27356	.02313	.03875	-.03703	1.47243	.0748328	.0387539	.0505900	.0261992	.2075296	.1487913	.3448085	.2553347
-1.50238	.27003	.01942	.03651	-.03125	1.56571	.0729155	.0365107	.0422519	.0211566	.2146642	.1524258	.3492917	.2576214
-1.59895	.26710	.01589	.03465	-.02570	1.65954	.0713427	.0346548	.0344504	.0167343	.2216302	.1558622	.3529956	.2594511
-1.69553	.26474	.01253	.03316	-.02034	1.75390	.0700887	.0331646	.0270759	.0128118	.2284597	.1591371	.3559666	.2608778
-1.79211	.26293	.00929	.03202	-.01512	1.84876	.0691334	.0320230	.0200301	.0092781	.2351826	.1622850	.3582413	.2619445
-1.88868	.26165	.00614	.03122	-.01002	1.94413	.0684615	.0312168	.0132236	.0060297	.2418268	.1653387	.3598471	.2626837
-1.98526	.26089	.00306	.03074	-.00499	2.03998	.0680625	.0307367	.0065733	.0029685	.2484194	.1683304	.3608030	.2631182
-2.08184	.26063	.00000	.03058	.00000	2.13632	.0679302	.0305772	.0000000	.0000000	.2549863	.1712911	.3611204	.2632616

WATER SURFACE ELEVATION

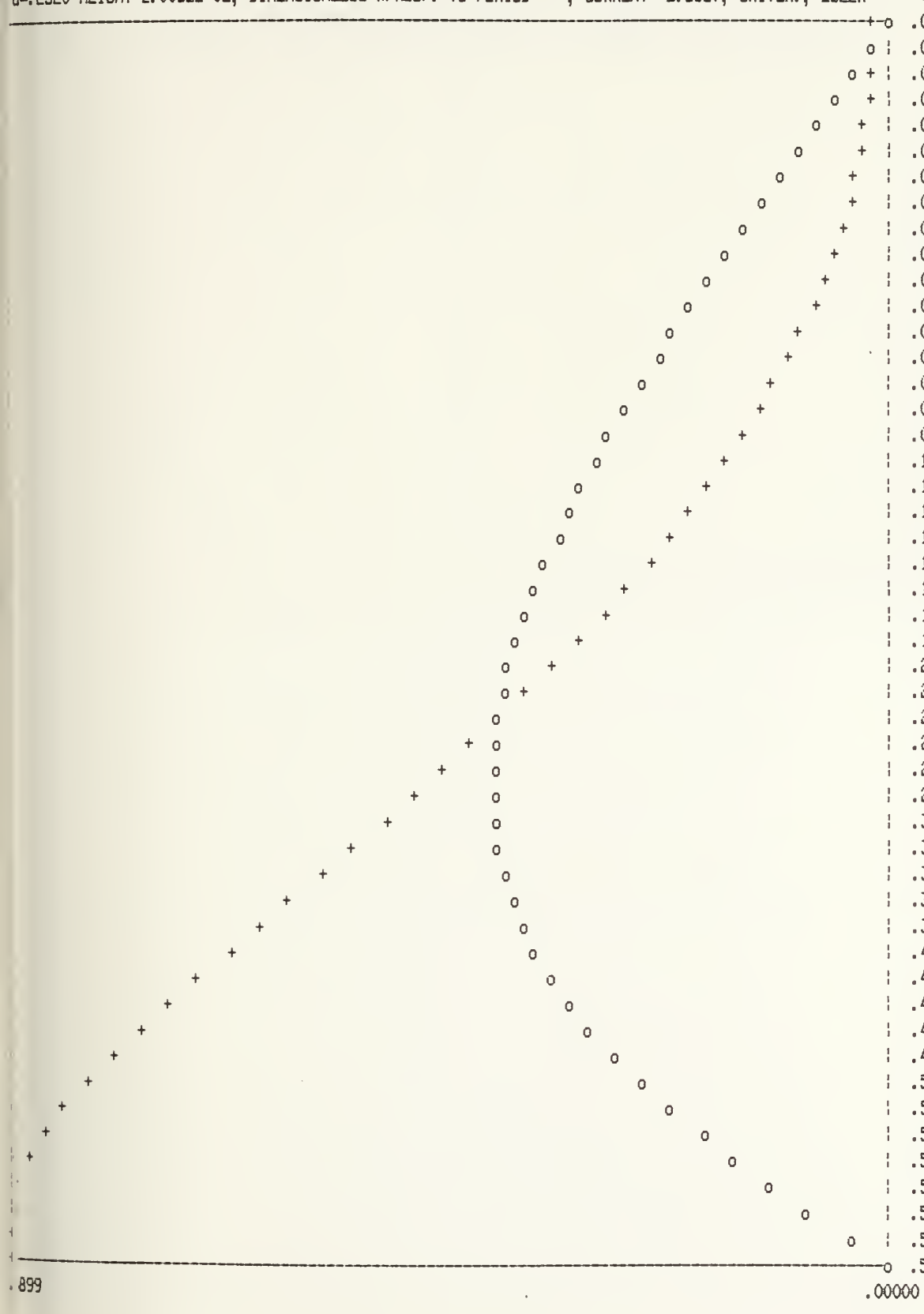
d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= 2.8557, CRITER., EULER



ELEV. VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.21922	2.55740	3.14159	180.00
-.21890	2.50412	3.07614	176.25
-.21795	2.45085	3.01069	172.50
-.21638	2.39757	2.94524	168.75
-.21417	2.34429	2.87979	165.00
-.21133	2.29101	2.81434	161.25
-.20785	2.23773	2.74889	157.50
-.20375	2.18445	2.68344	153.75
-.19901	2.13117	2.61799	150.00
-.19364	2.07789	2.55254	146.25
-.18763	2.02461	2.48709	142.50
-.18099	1.97133	2.42164	138.75
-.17371	1.91805	2.35619	135.00
-.16580	1.86477	2.29074	131.25
-.15726	1.81149	2.22529	127.50
-.14808	1.75822	2.15984	123.75
-.13828	1.70494	2.09440	120.00
-.12784	1.65166	2.02895	116.25
-.11679	1.59838	1.96350	112.50
-.10512	1.54510	1.89805	108.75
-.09283	1.49182	1.83260	105.00
-.07995	1.43854	1.76715	101.25
-.06647	1.38526	1.70170	97.50
-.05242	1.33198	1.63625	93.75
-.03780	1.27870	1.57080	90.00
-.02264	1.22542	1.50535	86.25
-.00696	1.17214	1.43990	82.50
.00922	1.11886	1.37445	78.75
.02584	1.06558	1.30900	75.00
.04289	1.01231	1.24355	71.25
.06030	.95903	1.17810	67.50
.07803	.90575	1.11265	63.75
.09600	.85247	1.04720	60.00
.11414	.79919	.98175	56.25
.13235	.74591	.91630	52.50
.15054	.69263	.85085	48.75
.16857	.63935	.78540	45.00
.18630	.58607	.71995	41.25
.20358	.53279	.65450	37.50
.22021	.47951	.58905	33.75
.23601	.42623	.52360	30.00
.25076	.37295	.45815	26.25
.26421	.31968	.39270	22.50
.27614	.26640	.32725	18.75
.28630	.21312	.26180	15.00
.29447	.15984	.19635	11.25
.30047	.10656	.13090	7.50
.30413	.05328	.06545	3.75
.30536	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

'd=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= 2.8557, CRITER., EULER

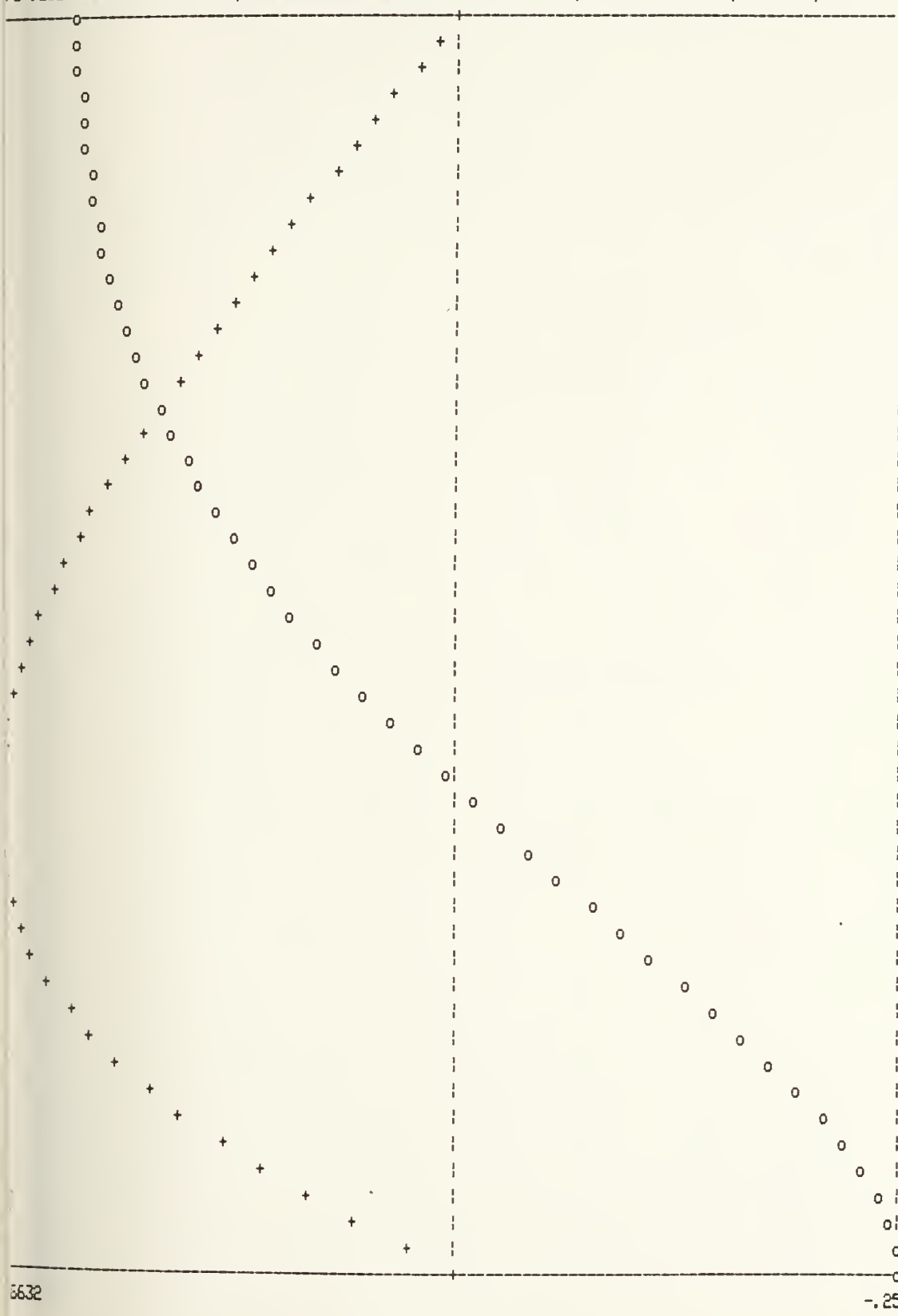


U *SQRT(K/G)	V *K	DIST.	ANGLE DEGREES
.01023	.00000	3.14159	180.00
.01054	.01174	3.07614	176.25
.01149	.02346	3.01069	172.50
.01307	.03516	2.94524	168.75
.01528	.04680	2.87979	165.00
.01813	.05838	2.81434	161.25
.02161	.06987	2.74889	157.50
.02574	.08127	2.68344	153.75
.03050	.09254	2.61799	150.00
.03591	.10368	2.55254	146.25
.04197	.11465	2.48709	142.50
.04868	.12544	2.42164	138.75
.05604	.13602	2.35619	135.00
.06406	.14636	2.29074	131.25
.07274	.15644	2.22529	127.50
.08208	.16623	2.15984	123.75
.09209	.17569	2.09440	120.00
.10276	.18479	2.02895	116.25
.11410	.19349	1.96350	112.50
.12611	.20175	1.89805	108.75
.13878	.20954	1.83260	105.00
.15210	.21680	1.76715	101.25
.16609	.22349	1.70170	97.50
.18071	.22955	1.63625	93.75
.19597	.23494	1.57080	90.00
.21184	.23959	1.50535	86.25
.22831	.24344	1.43990	82.50
.24536	.24642	1.37445	78.75
.26295	.24847	1.30900	75.00
.28104	.24952	1.24355	71.25
.29960	.24949	1.17810	67.50
.31856	.24830	1.11265	63.75
.33785	.24587	1.04720	60.00
.35741	.24211	.98175	56.25
.37712	.23696	.91630	52.50
.39689	.23032	.85085	48.75
.41657	.22212	.78540	45.00
.43602	.21228	.71995	41.25
.45504	.20076	.65450	37.50
.47345	.18750	.58905	33.75
.49100	.17249	.52360	30.00
.50745	.15574	.45815	26.25
.52252	.13730	.39270	22.50
.53593	.11726	.32725	18.75
.54739	.09576	.26180	15.00
.55664	.07301	.19635	11.25
.56343	.04926	.13090	7.50
.56759	.02481	.06545	3.75
.56899	.00000	.00000	.00

.899 .00000

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

/d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= 2.8557, CRITER., EULER



Ax *1/G	Ay *1/G	DIST. *K	ANGLE DEGREES
.00000	.21856	3.14159	180.00
.01174	.21835	3.07614	176.25
.02348	.21774	3.01069	172.50
.03519	.21671	2.94524	168.75
.04688	.21527	2.87979	165.00
.05853	.21340	2.81434	161.25
.07012	.21110	2.74889	157.50
.08165	.20835	2.68344	153.75
.09310	.20515	2.61799	150.00
.10446	.20147	2.55254	146.25
.11570	.19731	2.48709	142.50
.12681	.19265	2.42164	138.75
.13777	.18747	2.35619	135.00
.14855	.18175	2.29074	131.25
.15912	.17548	2.22529	127.50
.16946	.16864	2.15984	123.75
.17953	.16122	2.09440	120.00
.18931	.15320	2.02895	116.25
.19874	.14456	1.96350	112.50
.20779	.13529	1.89805	108.75
.21641	.12539	1.83260	105.00
.22456	.11484	1.76715	101.25
.23218	.10364	1.70170	97.50
.23921	.09179	1.63625	93.75
.24560	.07929	1.57080	90.00
.25127	.06615	1.50535	86.25
.25616	.05239	1.43990	82.50
.26019	.03801	1.37445	78.75
.26329	.02305	1.30900	75.00
.26536	.00753	1.24355	71.25
.26632	-.00850	1.17810	67.50
.26607	-.02499	1.11265	63.75
.26451	-.04188	1.04720	60.00
.26154	-.05910	.98175	56.25
.25704	-.07655	.91630	52.50
.25090	-.09414	.85085	48.75
.24302	-.11173	.78540	45.00
.23328	-.12919	.71995	41.25
.22159	-.14635	.65450	37.50
.20787	-.16301	.58905	33.75
.19205	-.17896	.52360	30.00
.17412	-.19396	.45815	26.25
.15409	-.20775	.39270	22.50
.13206	-.22006	.32725	18.75
.10818	-.23061	.26180	15.00
.08269	-.23914	.19635	11.25
.05589	-.24542	.13090	7.50
.02818	-.24927	.06545	3.75
.00000	-.25057	.00000	.00

3632

-.25057

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

EPTH: DEEP , HEIGHT/DEPTH= .2520

AVE HEIGHT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .00

OLUTION OF ORDER 1 NON-DIMENSIONALIZED BY WAVE NUMBER, 1 HEIGHT STEP(S).

AVE HEIGHT	.69873
AVE PERIOD	5.9031
AVE SPEED	1.0644
EAN EULERIAN FLUID SPEED	7.95567E-22
EAN MASS TRANSPORT SPEED	-1.10629E-20
EAN FLUID SPEED RELATIVE TO WAVE	1.0644
OLUME FLUX DUE TO WAVES	.12488
ERNOULLI CONSTANT	.51048

LUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.34937	.49674	.00000	.00000	-.28197	.00000	.2467471	.0000000	.8613842	.0000000	.0000000	.0000000	.0000000	.0000000
.20391	.42949	.00000	.00000	-.27268	.10502	.1844634	.0000000	.6171226	.0000000	.0313612	.0000000	.1075293	.0000000
.05845	.37135	.00000	.00000	-.25736	.21188	.1379012	.0000000	.4412902	.0000000	.0548062	.0000000	.1845059	.0000000
-.08700	.32108	.00000	.00000	-.23866	.32123	.1030923	.0000000	.3149045	.0000000	.0723333	.0000000	.2395027	.0000000
-.23246	.27761	.00000	.00000	-.21842	.43343	.0770698	.0000000	.2242062	.0000000	.0854362	.0000000	.2787113	.0000000
-.37792	.24003	.00000	.00000	-.19787	.54862	.0576159	.0000000	.1592316	.0000000	.0952316	.0000000	.3065981	.0000000
-.52337	.20754	.00000	.00000	-.17783	.66676	.0430725	.0000000	.1127732	.0000000	.1025545	.0000000	.3263805	.0000000
-.66883	.17944	.00000	.00000	-.15880	.78775	.0322002	.0000000	.0796233	.0000000	.1080290	.0000000	.3403732	.0000000
-.81429	.15515	.00000	.00000	-.14107	.91141	.0240722	.0000000	.0560234	.0000000	.1121216	.0000000	.3502386	.0000000
-.95974	.13415	.00000	.00000	-.12479	1.03755	.0179959	.0000000	.0392644	.0000000	.1151811	.0000000	.3571687	.0000000
-1.10520	.11599	.00000	.00000	-.11000	1.16595	.0134534	.0000000	.0273964	.0000000	.1174684	.0000000	.3620168	.0000000
-1.25066	.10029	.00000	.00000	-.09669	1.29639	.0100575	.0000000	.0190181	.0000000	.1191783	.0000000	.3653924	.0000000
-1.39611	.08671	.00000	.00000	-.08478	1.42867	.0075188	.0000000	.0131239	.0000000	.1204566	.0000000	.3677301	.0000000
-1.54157	.07497	.00000	.00000	-.07418	1.56258	.0056209	.0000000	.0089936	.0000000	.1214122	.0000000	.3693386	.0000000
-1.68703	.06482	.00000	.00000	-.06480	1.69794	.0042021	.0000000	.0061122	.0000000	.1221266	.0000000	.3704373	.0000000
-1.83248	.05605	.00000	.00000	-.05652	1.83459	.0031414	.0000000	.0041124	.0000000	.1226607	.0000000	.3711809	.0000000
-1.97794	.04846	.00000	.00000	-.04923	1.97237	.0023484	.0000000	.0027328	.0000000	.1230600	.0000000	.3716787	.0000000
-2.12340	.04190	.00000	.00000	-.04284	2.11114	.0017556	.0000000	.0017876	.0000000	.1233584	.0000000	.3720075	.0000000
-2.26885	.03623	.00000	.00000	-.03725	2.25078	.0013125	.0000000	.0011455	.0000000	.1235816	.0000000	.3722208	.0000000
-2.41431	.03132	.00000	.00000	-.03236	2.39118	.0009812	.0000000	.0007136	.0000000	.1237484	.0000000	.3723560	.0000000
-2.55977	.02708	.00000	.00000	-.02809	2.53225	.0007335	.0000000	.0004268	.0000000	.1238731	.0000000	.3724389	.0000000
-2.70522	.02342	.00000	.00000	-.02438	2.67389	.0005484	.0000000	.0002393	.0000000	.1239663	.0000000	.3724874	.0000000
-2.85068	.02025	.00000	.00000	-.02114	2.81605	.0004099	.0000000	.0001193	.0000000	.1240360	.0000000	.3725135	.0000000
-2.99614	.01751	.00000	.00000	-.01833	2.95864	.0003065	.0000000	.0000446	.0000000	.1240881	.0000000	.3725254	.0000000
-3.14159	.01514	.00000	.00000	-.01588	3.10161	.0002291	.0000000	.0000000	.0000000	.1241271	.0000000	.3725286	.0000000

OLUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

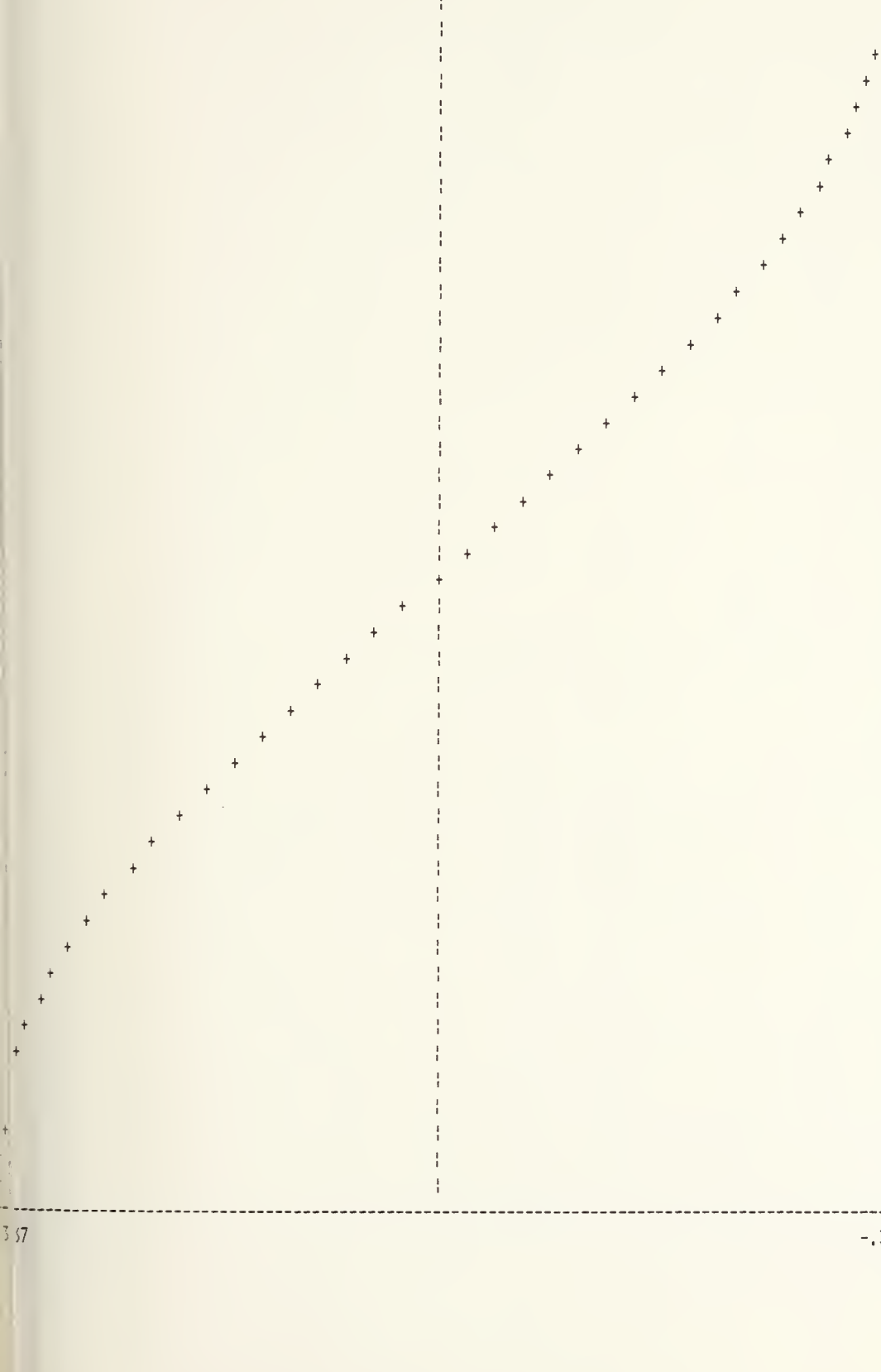
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.33746	.47413	.12704	.13522	-.26372	-.00925	.2248017	.1352232	.7820976	.4704489	.0000000	.0000000	.0000000	.0000000
.19250	.41015	.10990	.11698	-.25626	.09793	.1682242	.1169757	.5608754	.3900079	.0284866	.0182795	.0973391	.0623662
.04754	.35480	.09507	.10119	-.24272	.20667	.1258860	.1011906	.4014671	.3227102	.0498038	.0340922	.1670900	.1140242
-.09742	.30693	.08224	.08754	-.22572	.31764	.0942033	.0875355	.2867711	.2664733	.0657560	.0477711	.2169737	.1567284
-.24238	.26551	.07114	.07572	-.20705	.43123	.0704944	.0757232	.2043784	.2195375	.0776933	.0596042	.2525724	.1919546
-.38734	.22968	.06154	.06550	-.18793	.54756	.0527526	.0655048	.1452939	.1804167	.0866263	.0698404	.2779167	.2209434
-.53230	.19869	.05324	.05667	-.16917	.66665	.0394759	.0566654	.1030042	.1478564	.0933111	.0786954	.2959134	.2447368
-.67726	.17187	.04605	.04902	-.15128	.78839	.0295407	.0490187	.0727981	.1207983	.0983134	.0863554	.3086557	.2642089
-.82222	.14868	.03984	.04240	-.13456	.91265	.0221060	.0424040	.0512720	.0983505	.1020568	.0929817	.3176483	.2800929
-.96718	.12862	.03446	.03668	-.11917	1.03924	.0165424	.0366818	.0359700	.0797613	.1048580	.0987139	.3239716	.2930025
-1.11214	.11126	.02981	.03173	-.10516	1.16796	.0123791	.0317318	.0251227	.0643981	.1069543	.1036725	.3283996	.3034512
-1.25710	.09625	.02579	.02745	-.09252	1.29861	.0092635	.0274498	.0174570	.0517289	.1085229	.1079620	.3314858	.3118682
-1.40207	.08326	.02231	.02375	-.08119	1.43099	.0069321	.0237456	.0120586	.0413062	.1096968	.1116727	.3336251	.3186114
-1.54703	.07202	.01930	.02054	-.07110	1.56493	.0051875	.0205413	.0082717	.0327545	.1105752	.1148826	.3350987	.3239793
-1.69199	.06230	.01669	.01777	-.06216	1.70024	.0038819	.0177694	.0056272	.0257586	.1112326	.1176594	.3361061	.3282204
-1.83695	.05390	.01444	.01537	-.05425	1.83678	.0029049	.0153715	.0037899	.0200544	.1117245	.1200615	.3367886	.3315409
-1.98191	.04662	.01249	.01330	-.04730	1.97439	.0021738	.0132972	.0025209	.0154206	.1120926	.1221394	.3372460	.3341121
-2.12687	.04033	.01081	.01150	-.04119	2.11295	.0016267	.0115029	.0016507	.0116722	.1123680	.1239369	.3375484	.3360758
-2.27183	.03489	.00935	.00995	-.03583	2.25233	.0012173	.0099506	.0010588	.0086547	.1125742	.1254918	.3377448	.3375491
-2.41679	.03018	.00809	.00861	-.03115	2.39245	.0009109	.0086079	.0006602	.0062390	.1127284	.1268370	.3378694	.3386286
-2.56175	.02611	.00700	.00745	-.02706	2.53320	.0006817	.0074463	.0003953	.0043177	.1128439	.1280006	.3379459	.3393938
-2.70671	.02259	.00605	.00644	-.02349	2.67450	.0005101	.0064414	.0002218	.0028013	.1129302	.1290072	.3379906	.3399098
-2.85167	.01954	.00524	.00557	-.02039	2.81628	.0003817	.0055722	.0001107	.0016155	.1129949	.1298779	.3380147	.3402299
-2.99663	.01690	.00453	.00482	-.01768	2.95849	.0002857	.0048203	.0000414	.0006988	.1130433	.1306312	.3380257	.3403976
-3.14159	.01462	.00392	.00417	-.01533	3.10106	.0002138	.0041698	.0000000	.0000000	.1130795	.1312828	.3380287	.3404483

LUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30256	.41051	.23701	.25227	-.21225	-.03394	.1685225	.2522710	.5804174	.8688597	.0000000	.0000000	.0000000	.0000000
.15905	.35564	.20533	.21855	-.20990	.07918	.1264765	.2185462	.4174543	.7213437	.0211671	.0337826	.0716005	.1141022
.01555	.30809	.17788	.18933	-.20137	.19312	.0949209	.1893299	.2996786	.5977410	.0370531	.0630490	.1230571	.2087507
-.12796	.26691	.15410	.16402	-.18911	.30858	.0712384	.1640194	.2146863	.4942944	.0489756	.0884030	.1599644	.2871077
-.27147	.23122	.13350	.14209	-.17483	.42595	.0534645	.1420925	.1534500	.4078236	.0579234	.1103675	.1863793	.3518376
-.41497	.20031	.11565	.12310	-.15971	.54545	.0401253	.1230969	.1094064	.3356386	.0646387	.1293957	.2052401	.4051833
-.55848	.17353	.10019	.10664	-.14456	.66713	.0301141	.1066407	.0777881	.2754652	.0696786	.1458801	.2186719	.4490320
-.70198	.15034	.08680	.09238	-.12988	.79095	.0226007	.0923845	.0551368	.2253820	.0734611	.1601608	.2282097	.4849694
-.84549	.13024	.07519	.08003	-.11601	.91683	.0169619	.0800341	.0389462	.1837664	.0762998	.1725323	.2349605	.5143271
-.98900	.11283	.06514	.06933	-.10312	1.04462	.0127299	.0693348	.0274024	.1492497	.0784303	.1832500	.2397212	.5382220
-1.13250	.09774	.05643	.06007	-.09130	1.17419	.0095538	.0600658	.0191945	.1206775	.0800292	.1925349	.2430647	.5575902
-1.27601	.08468	.04889	.05204	-.08057	1.30538	.0071702	.0520359	.0133765	.0970773	.0812292	.2005786	.2454017	.5732148
-1.41952	.07336	.04235	.04508	-.07090	1.43803	.0053812	.0450795	.0092669	.0776303	.0821299	.2075469	.2470265	.5857506
-1.56302	.06355	.03669	.03905	-.06226	1.57199	.0040386	.0390530	.0063752	.0616480	.0828058	.2135837	.2481488	.5957443
-1.70653	.05505	.03179	.03383	-.05456	1.70713	.0030310	.0338322	.0043497	.0485514	.0833130	.2188135	.2489184	.6036514
-1.85004	.04769	.02754	.02931	-.04773	1.84331	.0022748	.0293094	.0029380	.0378548	.0836937	.2233441	.2494413	.6098513
-1.99354	.04132	.02386	.02539	-.04170	1.98040	.0017072	.0253912	.0019600	.0291504	.0839794	.2272690	.2497928	.6146592
-2.13705	.03579	.02067	.02200	-.03639	2.11831	.0012813	.0219968	.0012871	.0220967	.0841939	.2306692	.2500257	.6183363
-2.28055	.03101	.01790	.01906	-.03172	2.25694	.0009616	.0190561	.0008280	.0164081	.0843548	.2336149	.2501775	.6210991
-2.42406	.02686	.01551	.01651	-.02763	2.39619	.0007217	.0165086	.0005178	.0118455	.0844756	.2361668	.2502741	.6231264
-2.56757	.02327	.01344	.01430	-.02405	2.53600	.0005416	.0143017	.0003109	.0082095	.0845662	.2383775	.2503335	.6245654
-2.71107	.02016	.01164	.01239	-.02092	2.67628	.0004065	.0123898	.0001750	.0053340	.0846343	.2402927	.2503684	.6255372
-2.85458	.01747	.01008	.01073	-.01818	2.81699	.0003051	.0107334	.0000876	.0030806	.0846853	.2419519	.2503872	.6261410
-2.99809	.01513	.00874	.00930	-.01580	2.95806	.0002290	.0092985	.0000329	.0013344	.0847236	.2433893	.2503959	.6264578
-3.14159	.01311	.00757	.00806	-.01372	3.09945	.0001718	.0080555	.0000000	.0000000	.0847524	.2446345	.2503982	.6265535

WATER SURFACE ELEVATION

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

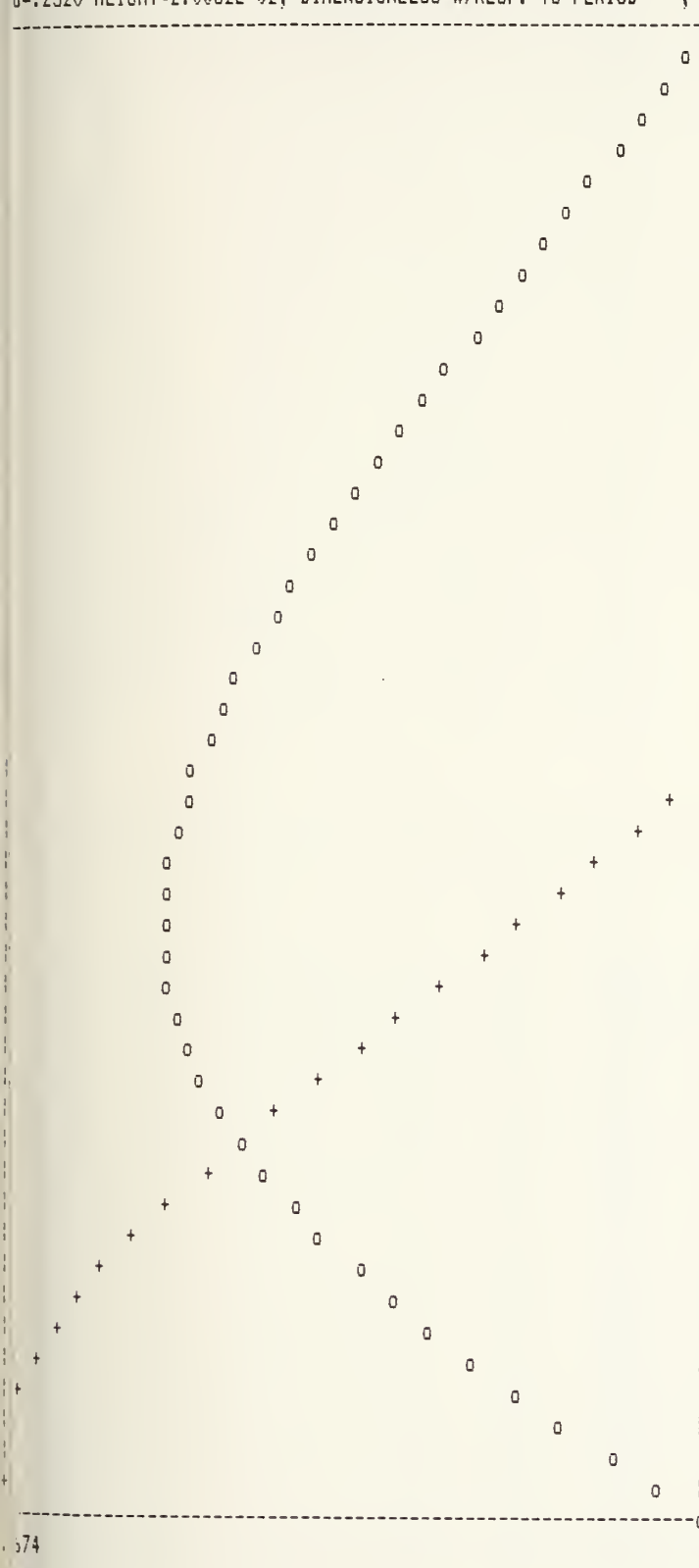


ELEV.VS.	TIME	DIST.	ANGL
*K	(K*6)^.5	*K	DEGREE
-.34937	2.95156	3.14159	180.0
-.34862	2.89007	3.07614	176.2
-.34638	2.82857	3.01069	172.3
-.34265	2.76708	2.94524	168.7
-.33746	2.70559	2.87979	165.0
-.33083	2.64410	2.81434	161.2
-.32277	2.58261	2.74889	157.5
-.31334	2.52112	2.68344	153.7
-.30256	2.45963	2.61799	150.0
-.29049	2.39814	2.55254	146.2
-.27717	2.33665	2.48709	142.5
-.26267	2.27516	2.42164	138.7
-.24704	2.21367	2.35619	135.0
-.23035	2.15218	2.29074	131.2
-.21268	2.09069	2.22529	127.5
-.19410	2.02919	2.15984	123.7
-.17468	1.96770	2.09440	120.0
-.15452	1.90621	2.02895	116.2
-.13370	1.84472	1.96350	112.5
-.11230	1.78323	1.89805	108.7
-.09042	1.72174	1.83260	105.0
-.06816	1.66025	1.76715	101.2
-.04560	1.59876	1.70170	97.5
-.02285	1.53727	1.63625	93.7
.00000	1.47578	1.57080	90.0
.02285	1.41429	1.50535	86.2
.04560	1.35280	1.43990	82.5
.06816	1.29131	1.37445	78.7
.09042	1.22981	1.30900	75.0
.11230	1.16832	1.24355	71.2
.13370	1.10683	1.17810	67.5
.15452	1.04534	1.11265	63.7
.17468	.98385	1.04720	60.0
.19410	.92236	.98175	56.2
.21268	.86087	.91630	52.5
.23035	.79938	.85085	48.7
.24704	.73789	.78540	45.0
.26267	.67640	.71995	41.2
.27717	.61491	.65450	37.5
.29049	.55342	.58905	33.7
.30256	.49193	.52360	30.0
.31334	.43044	.45815	26.2
.32277	.36894	.39270	22.5
.33083	.30745	.32725	18.7
.33746	.24596	.26180	15.0
.34265	.18447	.19635	11.2
.34638	.12298	.13090	7.5
.34862	.06149	.06545	3.7
.34937	.00000	.00000	.0

3 67 -.34937

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

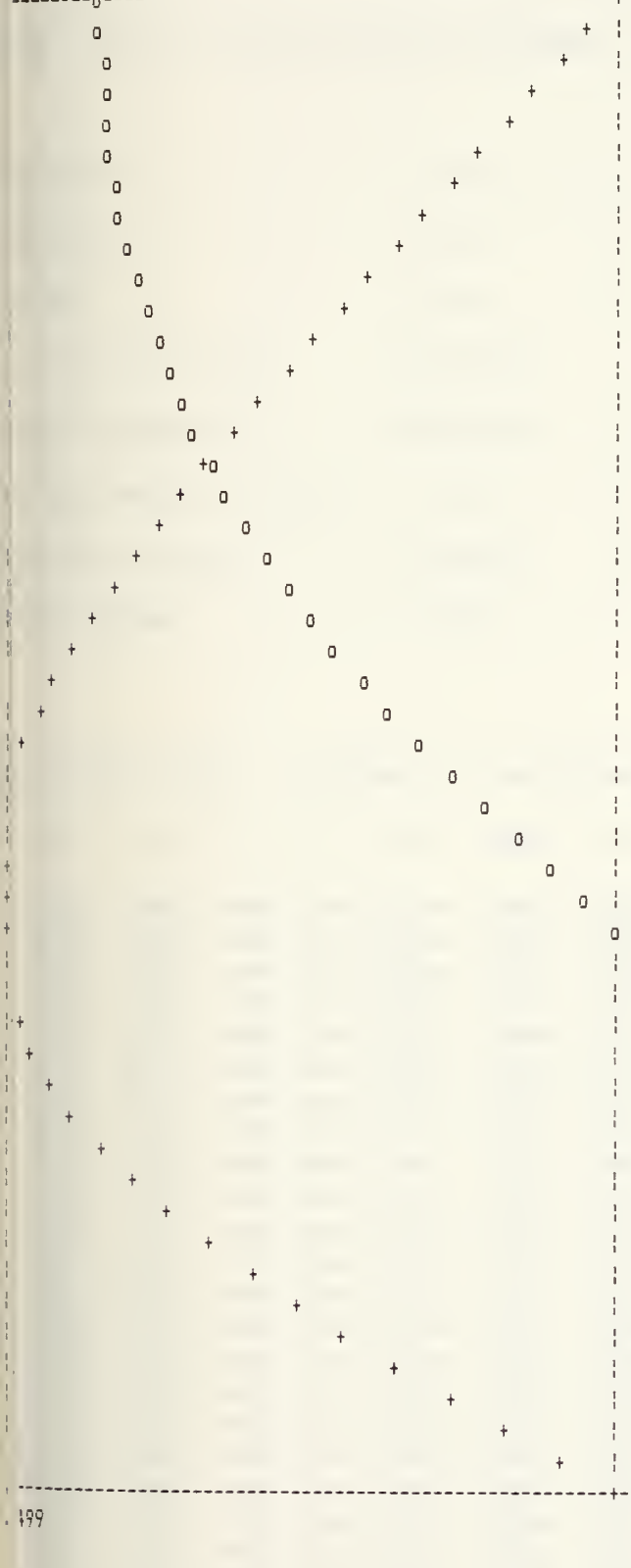
d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.24698	.00000	3.14159	180.00
-.24664	.01617	3.07614	176.25
-.24560	.03233	3.01069	172.50
-.24387	.04851	2.94524	168.75
-.24143	.06469	2.87979	165.00
-.23825	.08088	2.81434	161.25
-.23433	.09706	2.74889	157.50
-.22964	.11325	2.68344	153.75
-.22414	.12941	2.61799	150.00
-.21781	.14554	2.55254	146.25
-.21062	.16161	2.48709	142.50
-.20251	.17760	2.42164	138.75
-.19346	.19346	2.35619	135.00
-.18343	.20916	2.29074	131.25
-.17238	.22465	2.22529	127.50
-.16027	.23986	2.15984	123.75
-.14706	.25472	2.09440	120.00
-.13274	.26917	2.02895	116.25
-.11727	.28311	1.96350	112.50
-.10063	.29645	1.89805	108.75
-.08282	.30908	1.83260	105.00
-.06383	.32090	1.76715	101.25
-.04368	.33179	1.70170	97.50
-.02239	.34162	1.63625	93.75
.00000	.35027	1.57080	90.00
.02344	.35759	1.50535	86.25
.04785	.36347	1.43990	82.50
.07315	.36777	1.37445	78.75
.09923	.37035	1.30900	75.00
.12597	.37110	1.24355	71.25
.15322	.36989	1.17810	67.50
.18081	.36664	1.11265	63.75
.20856	.36124	1.04720	60.00
.23628	.35362	.98175	56.25
.26376	.34374	.91630	52.50
.29077	.33156	.85085	48.75
.31708	.31708	.78540	45.00
.34245	.30032	.71995	41.25
.36664	.28133	.65450	37.50
.38941	.26019	.58905	33.75
.41051	.23701	.52360	30.00
.42974	.21193	.45815	26.25
.44688	.18510	.39270	22.50
.46173	.15674	.32725	18.75
.47413	.12704	.26180	15.00
.48393	.09626	.19635	11.25
.49102	.06464	.13090	7.50
.49530	.03246	.06545	3.75
.49674	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



	Ax	Ay	DIST.	ANGLE
	‡1/G	‡1/G	‡K	DEGREES
	.00000	.32389	3.14159	180.00
	.01721	.32361	3.07614	176.25
	.03442	.32279	3.01069	172.50
	.05163	.32140	2.94524	168.75
	.06885	.31944	2.87979	165.00
	.08608	.31690	2.81434	161.25
	.10331	.31376	2.74889	157.50
	.12054	.30999	2.68344	153.75
	.13774	.30556	2.61799	150.00
	.15491	.30046	2.55254	146.25
	.17202	.29465	2.48709	142.50
	.18903	.28810	2.42164	138.75
	.20592	.28077	2.35619	135.00
	.22263	.27264	2.29074	131.25
	.23911	.26366	2.22529	127.50
	.25530	.25380	2.15984	123.75
	.27112	.24304	2.09440	120.00
	.28650	.23135	2.02895	116.25
	.30133	.21872	1.96350	112.50
	.31553	.20511	1.89805	108.75
	.32898	.19054	1.83260	105.00
	.34156	.17499	1.76715	101.25
	.35315	.15849	1.70170	97.50
	.36362	.14104	1.63625	93.75
	.37282	.12269	1.57080	90.00
	.38062	.10348	1.50535	86.25
	.38687	.08347	1.43990	82.50
	.39145	.06274	1.37445	78.75
	.39419	.04138	1.30900	75.00
	.39499	.01950	1.24355	71.25
	.39371	-.00278	1.17810	67.50
	.39024	-.02533	1.11265	63.75
	.38450	-.04800	1.04720	60.00
	.37639	-.07062	.98175	56.25
	.36587	-.09302	.91630	52.50
	.35291	-.11501	.85085	48.75
	.33750	-.13642	.78540	45.00
	.31966	-.15703	.71995	41.25
	.29945	-.17667	.65450	37.50
	.27694	-.19514	.58905	33.75
	.25227	-.21225	.52360	30.00
	.22557	-.22782	.45815	26.25
	.19702	-.24169	.39270	22.50
	.16683	-.25370	.32725	18.75
	.13522	-.26372	.26180	15.00
	.10246	-.27163	.19635	11.25
	.06881	-.27735	.13090	7.50
	.03455	-.28081	.06545	3.75
	.00000	-.28197	.00000	.00

.499 -.28197

ATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

EP , HEIGHT/DEPTH= .2520

HT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

CRITERION: EULER , MAGNITUDE= .00

OF ORDER 6 NON-DIMENSIONALIZED BY WAVE NUMBER, 1 HEIGHT STEP(S).

GHT	.70041
IOD	5.9102
ED	1.0631
ERIAN FLUID SPEED	5.25107E-22
S TRANSPORT SPEED	5.25107E-22
D SPEED RELATIVE TO WAVE	1.0631
LUX DUE TO WAVES	5.54649E-02
CONSTANT	.56508

S DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
2	.53442	.00000	.00000	-.31744	.00000	.2856016	.0000000	1.0187160	.0000000	.0000000	.0000000	.0000000	.0000000
0	.45312	.00000	.00000	-.30356	.10234	.2053215	.0000000	.7018489	.0000000	.0364808	.0000000	.1278564	.0000000
8	.38545	.00000	.00000	-.28190	.20739	.1485739	.0000000	.4857876	.0000000	.0627790	.0000000	.2161105	.0000000
4	.32870	.00000	.00000	-.25700	.31595	.1080456	.0000000	.3372155	.0000000	.0818486	.0000000	.2772684	.0000000
7	.28085	.00000	.00000	-.23138	.42828	.0788758	.0000000	.2344525	.0000000	.0957389	.0000000	.3197494	.0000000
9	.24032	.00000	.00000	-.20645	.54438	.0577561	.0000000	.1630920	.0000000	.1058921	.0000000	.3492912	.0000000
1	.20590	.00000	.00000	-.18299	.66408	.0423941	.0000000	.1134119	.0000000	.1133343	.0000000	.3698384	.0000000
3	.17658	.00000	.00000	-.16137	.78714	.0311791	.0000000	.0787759	.0000000	.1188016	.0000000	.3841200	.0000000
5	.15155	.00000	.00000	-.14173	.91326	.0229676	.0000000	.0546157	.0000000	.1228253	.0000000	.3940325	.0000000
7	.13016	.00000	.00000	-.12410	1.04215	.0169411	.0000000	.0377671	.0000000	.1257909	.0000000	.4008975	.0000000
9	.11185	.00000	.00000	-.10837	1.17352	.0125095	.0000000	.0260285	.0000000	.1279794	.0000000	.4056382	.0000000
1	.09615	.00000	.00000	-.09445	1.30709	.0092456	.0000000	.0178632	.0000000	.1295960	.0000000	.4088998	.0000000
4	.08269	.00000	.00000	-.08217	1.44261	.0068385	.0000000	.0121961	.0000000	.1307912	.0000000	.4111335	.0000000
6	.07114	.00000	.00000	-.07138	1.57984	.0050613	.0000000	.0082744	.0000000	.1316755	.0000000	.4126547	.0000000
8	.06122	.00000	.00000	-.06194	1.71857	.0037480	.0000000	.0055703	.0000000	.1323301	.0000000	.4136835	.0000000
0	.05269	.00000	.00000	-.05369	1.85861	.0027768	.0000000	.0037142	.0000000	.1328150	.0000000	.4143735	.0000000
2	.04537	.00000	.00000	-.04650	1.99980	.0020580	.0000000	.0024469	.0000000	.1331743	.0000000	.4148313	.0000000
4	.03906	.00000	.00000	-.04025	2.14198	.0015258	.0000000	.0015873	.0000000	.1334406	.0000000	.4151311	.0000000
6	.03364	.00000	.00000	-.03481	2.28504	.0011315	.0000000	.0010090	.0000000	.1336380	.0000000	.4153240	.0000000
9	.02897	.00000	.00000	-.03010	2.42884	.0008393	.0000000	.0006237	.0000000	.1337845	.0000000	.4154453	.0000000
1	.02495	.00000	.00000	-.02601	2.57330	.0006227	.0000000	.0003702	.0000000	.1338932	.0000000	.4155192	.0000000
3	.02150	.00000	.00000	-.02247	2.71833	.0004621	.0000000	.0002060	.0000000	.1339738	.0000000	.4155620	.0000000
5	.01852	.00000	.00000	-.01940	2.86384	.0003430	.0000000	.0001019	.0000000	.1340336	.0000000	.4155849	.0000000
7	.01596	.00000	.00000	-.01675	3.00978	.0002546	.0000000	.0000378	.0000000	.1340780	.0000000	.4155953	.0000000
9	.01375	.00000	.00000	-.01446	3.15609	.0001890	.0000000	.0000000	.0000000	.1341110	.0000000	.4155981	.0000000

LUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

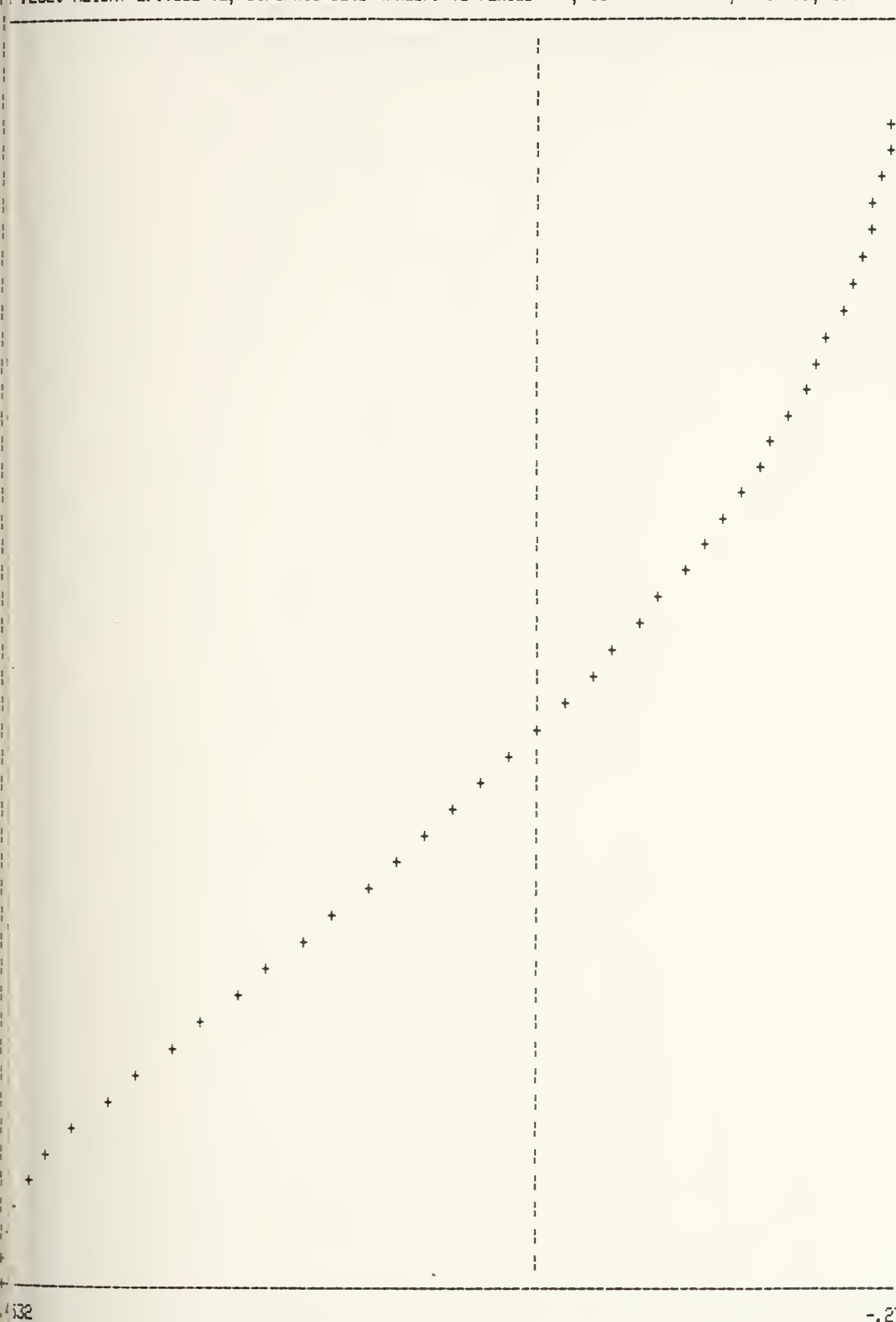
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.39067	.48941	.14676	.18411	-.27936	-.00092	.2395253	.1841083	.8460651	.6503178	.0000000	.0000000	.0000000	.0000000
.24349	.41731	.12251	.15004	-.27168	.10556	.1741509	.1500369	.5895149	.5078871	.0304419	.0245893	.1056425	.0852308
.09631	.35660	.10297	.12348	-.25527	.21389	.1271622	.1234801	.4117388	.3998165	.0526151	.0447171	.1793234	.1520275
-.05087	.30524	.08700	.10246	-.23473	.32498	.0931698	.1024594	.2879624	.3166737	.0688291	.0613437	.2308135	.2047531
-.19804	.26163	.07380	.08559	-.21273	.43922	.0684528	.0855902	.2014942	.2519389	.0807227	.0751820	.2668320	.2465966
-.34522	.22451	.06280	.07189	-.19083	.55671	.0504062	.0718919	.1409544	.2010364	.0894694	.0867709	.2920324	.2799304
-.49240	.19284	.05357	.06066	-.16989	.67735	.0371858	.0606574	.0985124	.1606931	.0959152	.0965250	.3096544	.3065496
-.63958	.16575	.04579	.05137	-.15038	.80098	.0274747	.0513669	.0687420	.1285208	.1006734	.1047687	.3219624	.3278325
-.78675	.14257	.03920	.04363	-.13251	.92736	.0203253	.0436312	.0478629	.1027445	.1041910	.1117595	.3305432	.3448510
-.93393	.12269	.03360	.03715	-.11636	1.05625	.0150523	.0371534	.0332303	.0820221	.1067944	.1177044	.3365108	.3584478
-1.08111	.10563	.02883	.03170	-.10189	1.18739	.0111571	.0317031	.0229891	.0653238	.1087231	.1227714	.3406479	.3692908
-1.22829	.09097	.02477	.02710	-.08901	1.32053	.0082761	.0270994	.0158348	.0518495	.1101531	.1270986	.3435049	.3779134
-1.37546	.07838	.02129	.02320	-.07762	1.45547	.0061429	.0231979	.0108492	.0409705	.1112142	.1307999	.3454685	.3847439
-1.52264	.06754	.01831	.01988	-.06757	1.59198	.0045620	.0198824	.0073857	.0321886	.1120020	.1339702	.3468104	.3901276
-1.66982	.05822	.01576	.01706	-.05875	1.72987	.0033895	.0170583	.0049886	.0251060	.1125871	.1366886	.3477210	.3943438
-1.81700	.05019	.01356	.01465	-.05103	1.86898	.0025193	.0146482	.0033371	.0194029	.1130220	.1390218	.3483337	.3976192
-1.96417	.04328	.01168	.01259	-.04428	2.00916	.0018732	.0125879	.0022055	.0148212	.1133452	.1410261	.3487416	.4001377
-2.11135	.03732	.01006	.01082	-.03839	2.15026	.0013931	.0108242	.0014353	.0111515	.1135856	.1427490	.3490095	.4020490
-2.25853	.03219	.00867	.00931	-.03327	2.29217	.0010364	.0093126	.0009152	.0082236	.1137644	.1442308	.3491825	.4034748
-2.40571	.02777	.00748	.00802	-.02881	2.43479	.0007711	.0080158	.0005675	.0058987	.1138974	.1455060	.3492916	.4045140
-2.55288	.02396	.00644	.00690	-.02494	2.57802	.0005739	.0069022	.0003378	.0040634	.1139963	.1466038	.3493582	.4052471
-2.70006	.02067	.00556	.00595	-.02158	2.72178	.0004271	.0059454	.0001886	.0026251	.1140700	.1475492	.3493969	.4057393
-2.84724	.01783	.00479	.00512	-.01866	2.86600	.0003180	.0051226	.0000936	.0015079	.1141248	.1483637	.3494177	.4060434
-2.99442	.01539	.00413	.00441	-.01614	3.01062	.0002367	.0044148	.0000348	.0006498	.1141656	.1490655	.3494272	.4062022
-3.14159	.01328	.00357	.00381	-.01395	3.15559	.0001763	.0038056	.0000000	.0000000	.1141960	.1496705	.3494297	.4062500

SUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30510	.38595	.24781	.29440	-.19616	.00000	.1489552	.2943990	.5134026	1.0147021	.0000000	.0000000	.0000000	.0000000
.16149	.33310	.20996	.24639	-.19904	.11509	.1109531	.2463909	.3664868	.8138485	.0186630	.0388320	.0631814	.1313010
.01787	.28752	.17858	.20709	-.19270	.23049	.0826695	.2070857	.2611913	.6542804	.0325663	.0713944	.1082525	.2367215
-.12574	.24825	.15236	.17475	-.18122	.34721	.0616278	.1747495	.1858604	.5270191	.0429277	.0988124	.1403535	.3215460
-.26935	.21441	.13032	.14800	-.16715	.46579	.0459700	.1479967	.1320371	.4250824	.0506539	.1219876	.1631804	.3899126
-.41296	.18524	.11169	.12574	-.15210	.58647	.0343121	.1257387	.0936250	.3430944	.0564186	.1416434	.1793843	.4450724
-.55657	.16008	.09589	.10712	-.13704	.70933	.0256261	.1071230	.0662438	.2769148	.0607225	.1583643	.1908639	.4895928
-.70019	.13838	.08244	.09148	-.12255	.83431	.0191496	.0914800	.0467520	.2233397	.0639377	.1726252	.1989777	.5255141
-.84380	.11965	.07095	.07828	-.10897	.96131	.0143173	.0782800	.0328981	.1798713	.0663408	.1848150	.2046970	.5544671
-.98741	.10349	.06113	.06710	-.09645	1.09018	.0107092	.0671011	.0230695	.1445479	.0681379	.1952542	.2087159	.5777623
1.13102	.08952	.05270	.05760	-.08507	1.22077	.0080136	.0576039	.0161119	.1158167	.0694823	.2042088	.2115293	.5964591
1.27464	.07745	.04547	.04951	-.07481	1.35292	.0059987	.0495137	.0111992	.0924399	.0704884	.2119005	.2134904	.6114122
1.41825	.06702	.03925	.04261	-.06563	1.48646	.0044917	.0426058	.0077408	.0734244	.0712417	.2185152	.2148504	.6233222
1.56186	.05800	.03390	.03670	-.05747	1.62124	.0033643	.0366956	.0053147	.0579693	.0718058	.2242096	.2157879	.6327571
1.70547	.05020	.02930	.03163	-.05024	1.75713	.0025204	.0316304	.0035197	.0454251	.0722284	.2291158	.2164294	.6401814
1.84908	.04346	.02532	.02728	-.04386	1.89400	.0018886	.0272830	.0024411	.0352635	.0725450	.2333461	.2168646	.6459754
1.99270	.03762	.02189	.02355	-.03824	2.03172	.0014155	.0235468	.0016262	.0270529	.0727822	.2369960	.2171557	.6504501
2.13631	.03257	.01893	.02033	-.03332	2.17020	.0010610	.0203325	.0010666	.0204400	.0729601	.2401468	.2173501	.6538603
2.27992	.02820	.01638	.01756	-.02900	2.30935	.0007954	.0175546	.0006854	.0151349	.0730934	.2428680	.2174759	.6564148
2.42353	.02442	.01417	.01518	-.02523	2.44907	.0005964	.0151791	.0004282	.0108995	.0731933	.2452192	.2175558	.6582843
2.56714	.02115	.01226	.01312	-.02193	2.58930	.0004472	.0131218	.0002569	.0075378	.0732682	.2472514	.2176050	.6596082
2.71076	.01831	.01061	.01135	-.01906	2.72998	.0003354	.0113464	.0001445	.0048885	.0733244	.2490084	.2176338	.6605004
2.85437	.01586	.00919	.00981	-.01655	2.87104	.0002515	.0098136	.0000722	.0028187	.0733666	.2505278	.2176494	.6610539
2.99798	.01373	.00795	.00849	-.01437	3.01243	.0001886	.0084896	.0000271	.0012192	.0733982	.2518421	.2176565	.6613438
3.14159	.01189	.00688	.00735	-.01247	3.15412	.0001415	.0073456	.0000000	.0000000	.0734219	.2529791	.2176585	.6614314

WATER SURFACE ELEVATION

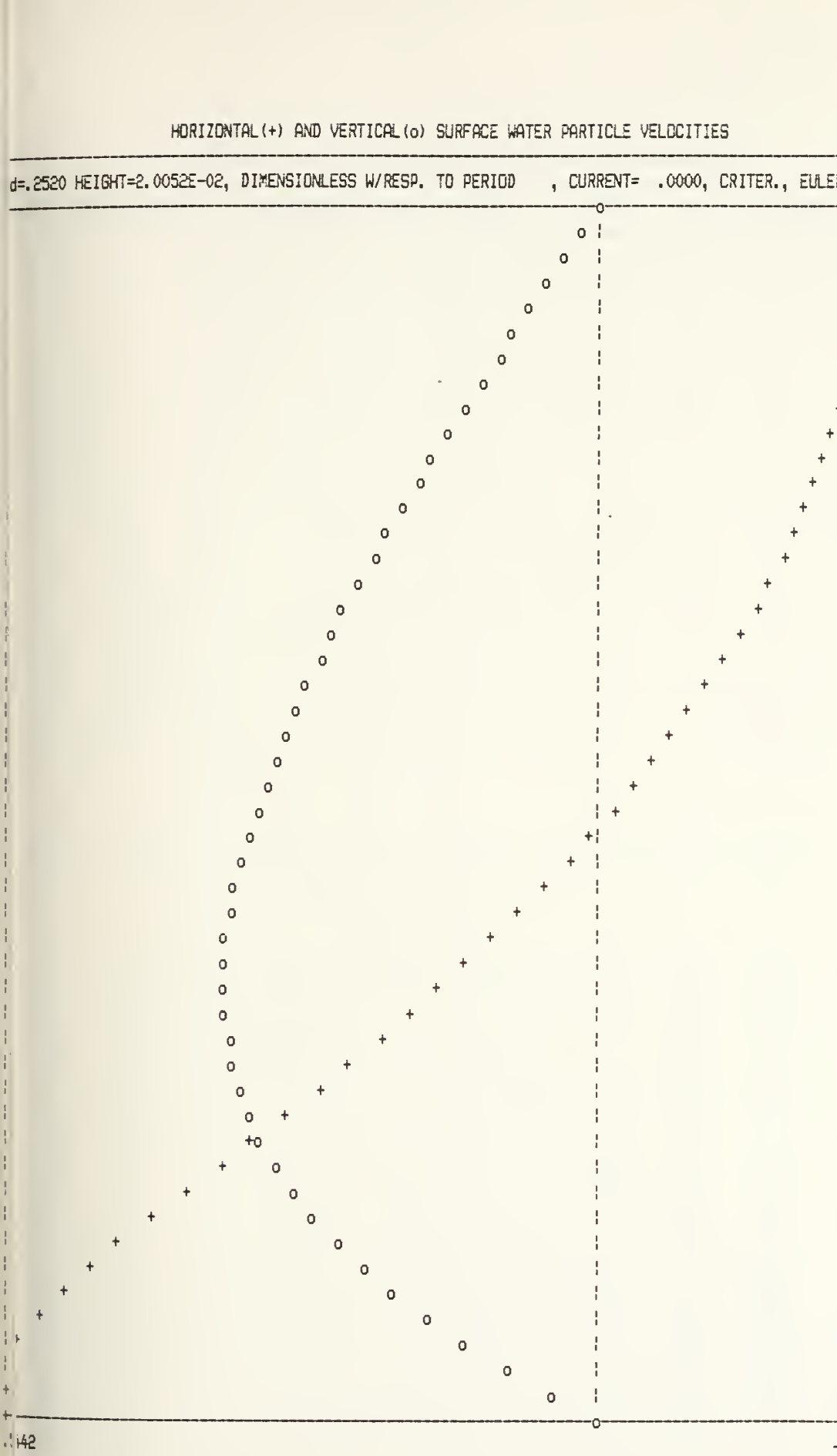
=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



ELEV. VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.27509	2.95510	3.14159	180.00
-.27473	2.89353	3.07614	176.25
-.27366	2.83197	3.01069	172.50
-.27185	2.77040	2.94524	168.75
-.26929	2.70884	2.87979	165.00
-.26595	2.64727	2.81434	161.25
-.26182	2.58571	2.74889	157.50
-.25689	2.52414	2.68344	153.75
-.25116	2.46258	2.61799	150.00
-.24464	2.40101	2.55254	146.25
-.23736	2.33945	2.48709	142.50
-.22935	2.27789	2.42164	138.75
-.22064	2.21632	2.35619	135.00
-.21125	2.15476	2.29074	131.25
-.20121	2.09319	2.22529	127.50
-.19049	2.03163	2.15984	123.75
-.17910	1.97006	2.09440	120.00
-.16698	1.90850	2.02895	116.25
-.15410	1.84693	1.96350	112.50
-.14039	1.78537	1.89805	108.75
-.12582	1.72381	1.83260	105.00
-.11035	1.66224	1.76715	101.25
-.09396	1.60068	1.70170	97.50
-.07668	1.53911	1.63625	93.75
-.05855	1.47755	1.57080	90.00
-.03963	1.41598	1.50535	86.25
-.02000	1.35442	1.43990	82.50
.00024	1.29285	1.37445	78.75
.02101	1.23129	1.30900	75.00
.04225	1.16973	1.24355	71.25
.06393	1.10816	1.17810	67.50
.08603	1.04660	1.11265	63.75
.10859	.98503	1.04720	60.00
.13164	.92347	.98175	56.25
.15523	.86190	.91630	52.50
.17938	.80034	.85085	48.75
.20407	.73877	.78540	45.00
.22922	.67721	.71995	41.25
.25464	.61564	.65450	37.50
.28006	.55408	.58905	33.75
.30510	.49252	.52360	30.00
.32926	.43095	.45815	26.25
.35199	.36939	.39270	22.50
.37267	.30782	.32725	18.75
.39067	.24626	.26180	15.00
.40539	.18469	.19635	11.25
.41632	.12313	.13090	7.50
.42305	.06156	.06545	3.75
.42532	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

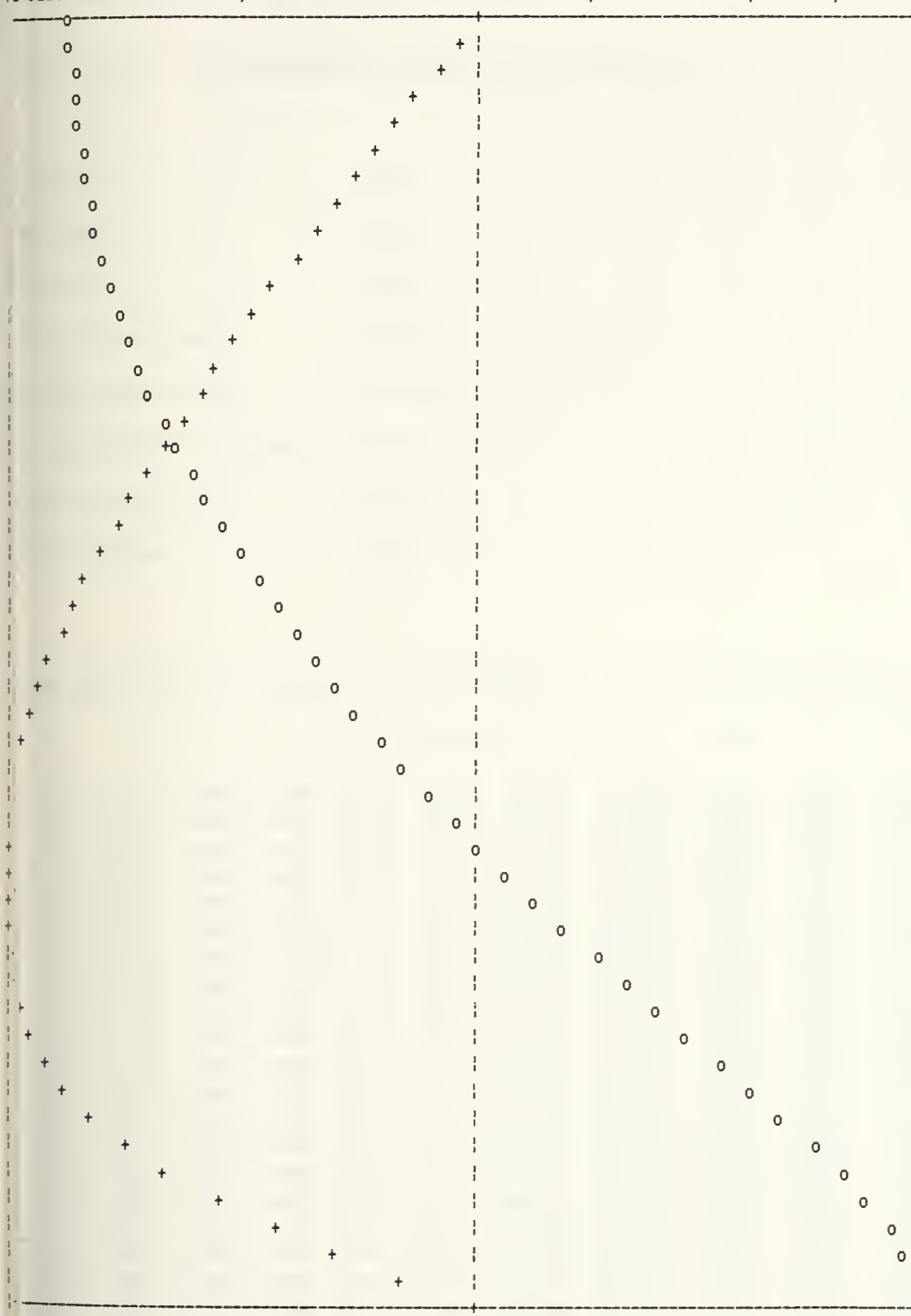


U	V	DIST.	ANGL
*SQRT(K/G)		*K	DEGRE
-.23317	.00000	3.14159	180.
-.23279	.01479	3.07614	176.
-.23166	.02956	3.01069	172.
-.22979	.04428	2.94524	168.
-.22716	.05894	2.87979	165.
-.22380	.07350	2.81434	161.
-.21969	.08795	2.74889	157.
-.21485	.10227	2.68344	153.
-.20926	.11643	2.61799	150.
-.20291	.13042	2.55254	146.
-.19581	.14419	2.48709	142.
-.18793	.15773	2.42164	138.
-.17928	.17100	2.35619	135.
-.16984	.18396	2.29074	131.
-.15960	.19658	2.22529	127.
-.14857	.20882	2.15984	123.
-.13675	.22066	2.09440	120.
-.12413	.23206	2.02895	116.
-.11073	.24300	1.96350	112.
-.09653	.25346	1.89805	108.
-.08153	.26341	1.83260	105.
-.06573	.27281	1.76715	101.
-.04912	.28164	1.70170	97.
-.03167	.28985	1.63625	93.
-.01338	.29736	1.57080	90.
.00577	.30411	1.50535	86.
.02579	.31002	1.43990	82.
.04668	.31498	1.37445	78.
.06842	.31891	1.30900	75.
.09101	.32170	1.24355	71.
.11442	.32326	1.17810	67.
.13863	.32349	1.11265	63.
.16361	.32231	1.04720	60.
.18935	.31963	.98175	56.
.21581	.31536	.91630	52.
.24297	.30937	.85085	48.
.27078	.30155	.78540	45.
.29916	.29170	.71995	41.
.32797	.27964	.65450	37.
.35701	.26510	.58905	33.
.38595	.24781	.52360	30.
.41433	.22752	.45815	26.
.44155	.20398	.39270	22.
.46687	.17706	.32725	18.
.48941	.14676	.26180	15.
.50826	.11332	.19635	11.
.52250	.07720	.13090	7.
.53139	.03912	.06545	3.
.53442	.00000	.00000	.

.1142 -.23317

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax *1/G	Ay *1/G	DIST. *K	ANGLE DEGREES
.00000	.29306	3.14159	180.00
.01476	.29275	3.07614	176.25
.02949	.29181	3.01069	172.50
.04419	.29026	2.94524	168.75
.05884	.28809	2.87979	165.00
.07341	.28531	2.81434	161.25
.08789	.28194	2.74889	157.50
.10227	.27796	2.68344	153.75
.11653	.27338	2.61799	150.00
.13064	.26820	2.55254	146.25
.14459	.26240	2.48709	142.50
.15834	.25597	2.42164	138.75
.17188	.24891	2.35619	135.00
.18517	.24120	2.29074	131.25
.19819	.23285	2.22529	127.50
.21090	.22385	2.15984	123.75
.22329	.21422	2.09440	120.00
.23533	.20396	2.02895	116.25
.24700	.19308	1.96350	112.50
.25829	.18160	1.89805	108.75
.26918	.16953	1.83260	105.00
.27964	.15687	1.76715	101.25
.28964	.14362	1.70170	97.50
.29915	.12977	1.63625	93.75
.30811	.11532	1.57080	90.00
.31644	.10024	1.50535	86.25
.32408	.08453	1.43990	82.50
.33093	.06816	1.37445	78.75
.33690	.05115	1.30900	75.00
.34188	.03348	1.24355	71.25
.34577	.01516	1.17810	67.50
.34848	-.00377	1.11265	63.75
.34990	-.02329	1.04720	60.00
.34993	-.04338	.98175	56.25
.34844	-.06400	.91630	52.50
.34527	-.08511	.85085	48.75
.34021	-.10668	.78540	45.00
.33299	-.12867	.71995	41.25
.32326	-.15100	.65450	37.50
.31057	-.17355	.58905	33.75
.29440	-.19616	.52360	30.00
.27417	-.21854	.45815	26.25
.24931	-.24027	.39270	22.50
.21937	-.26079	.32725	18.75
.18411	-.27936	.26180	15.00
.14367	-.29513	.19635	11.25
.09867	-.30722	.13090	7.50
.05025	-.31484	.06545	3.75
.00000	-.31744	.00000	.00

.3193

-.31744

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

EPTH: DEEP , HEIGHT/DEPTH= .2520

AVE HEIGHT 2.005161E-02, DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .00

OLUTION OF ORDER 7 NON-DIMENSIONALIZED BY WAVE NUMBER, 1 HEIGHT STEP(S).

AVE HEIGHT	.70042
AVE PERIOD	5.9102
AVE SPEED	1.0631
EAN EULERIAN FLUID SPEED	1.92776E-22
EAN MASS TRANSPORT SPEED	-4.04648E-20
EAN FLUID SPEED RELATIVE TO WAVE	1.0631
OLUME FLUX DUE TO WAVES	5.54480E-02
ERNOULLI CONSTANT	.56509

LUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.42534	.53443	.00000	.00000	-.31758	.00000	.2856135	.0000000	1.0187636	.0000000	.0000000	.0000000	.0000000	.0000000
.27672	.45311	.00000	.00000	-.30359	.10233	.2053129	.0000000	.7018228	.0000000	.0364813	.0000000	.1278586	.0000000
.12809	.38544	.00000	.00000	-.28189	.20738	.1485656	.0000000	.4857629	.0000000	.0627783	.0000000	.2161094	.0000000
-.02053	.32870	.00000	.00000	-.25698	.31594	.1080406	.0000000	.3372016	.0000000	.0818470	.0000000	.2772548	.0000000
-.16915	.28084	.00000	.00000	-.23136	.42827	.0788733	.0000000	.2344463	.0000000	.0957368	.0000000	.3197445	.0000000
-.31777	.24032	.00000	.00000	-.20644	.54438	.0577551	.0000000	.1630900	.0000000	.1058898	.0000000	.3492859	.0000000
-.46639	.20590	.00000	.00000	-.18298	.66408	.0423938	.0000000	.1134118	.0000000	.1133320	.0000000	.3698330	.0000000
-.61502	.17658	.00000	.00000	-.16136	.78714	.0311791	.0000000	.0787765	.0000000	.1187992	.0000000	.3841147	.0000000
-.76364	.15155	.00000	.00000	-.14173	.91326	.0229678	.0000000	.0546164	.0000000	.1228230	.0000000	.3940273	.0000000
-.91226	.13016	.00000	.00000	-.12409	1.04216	.0169413	.0000000	.0377678	.0000000	.1257886	.0000000	.4008924	.0000000
-1.06088	.11185	.00000	.00000	-.10837	1.17353	.0125097	.0000000	.0260291	.0000000	.1279772	.0000000	.4056333	.0000000
-1.20950	.09615	.00000	.00000	-.09444	1.30710	.0092457	.0000000	.0178636	.0000000	.1295938	.0000000	.4088950	.0000000
-1.35813	.08270	.00000	.00000	-.08217	1.44262	.0068386	.0000000	.0121964	.0000000	.1307891	.0000000	.4111288	.0000000
-1.50675	.07114	.00000	.00000	-.07138	1.57984	.0050614	.0000000	.0082746	.0000000	.1316734	.0000000	.4126500	.0000000
-1.65537	.06122	.00000	.00000	-.06194	1.71858	.0037481	.0000000	.0055705	.0000000	.1323280	.0000000	.4136788	.0000000
-1.80399	.05270	.00000	.00000	-.05369	1.85862	.0027768	.0000000	.0037143	.0000000	.1328129	.0000000	.4143688	.0000000
-1.95262	.04537	.00000	.00000	-.04650	1.99981	.0020580	.0000000	.0024470	.0000000	.1331722	.0000000	.4148266	.0000000
-2.10124	.03906	.00000	.00000	-.04025	2.14199	.0015258	.0000000	.0015874	.0000000	.1334385	.0000000	.4151264	.0000000
-2.24986	.03364	.00000	.00000	-.03481	2.28505	.0011316	.0000000	.0010090	.0000000	.1336360	.0000000	.4153194	.0000000
-2.39848	.02897	.00000	.00000	-.03010	2.42886	.0008394	.0000000	.0006237	.0000000	.1337824	.0000000	.4154407	.0000000
-2.54710	.02496	.00000	.00000	-.02601	2.57332	.0006228	.0000000	.0003702	.0000000	.1338911	.0000000	.4155146	.0000000
-2.69573	.02150	.00000	.00000	-.02247	2.71834	.0004621	.0000000	.0002060	.0000000	.1339717	.0000000	.4155574	.0000000
-2.84435	.01852	.00000	.00000	-.01940	2.86386	.0003430	.0000000	.0001019	.0000000	.1340315	.0000000	.4155803	.0000000
-2.99297	.01596	.00000	.00000	-.01675	3.00980	.0002546	.0000000	.0000378	.0000000	.1340760	.0000000	.4155907	.0000000
-3.14159	.01375	.00000	.00000	-.01446	3.15611	.0001890	.0000000	.0000000	.0000000	.1341089	.0000000	.4155935	.0000000

LUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.39000	.48900	.14665	.18403	-.27921	-.00046	.2391249	.1840331	.8444922	.6499301	.0000000	.0000000	.0000000	.0000000
.24285	.41700	.12240	.14991	-.27155	.10602	.1738880	.1499148	.5885142	.5073783	.0303874	.0245702	.1054333	.0851488
.09570	.35635	.10288	.12337	-.25515	.21434	.1269857	.1233651	.4110901	.3993692	.0525241	.0446767	.1789790	.1518627
-.05145	.30504	.08693	.10237	-.23462	.32543	.0930499	.1023654	.2875375	.3163239	.0687132	.0612848	.2303805	.2045197
-.19860	.26148	.07375	.08552	-.21263	.43966	.0683707	.0855173	.2012145	.2516769	.0805897	.0751082	.2663404	.2463103
-.34575	.22439	.06276	.07184	-.19074	.55714	.0503497	.0718362	.1407698	.2008430	.0893245	.0866855	.2915018	.2796044
-.49290	.19274	.05354	.06061	-.16981	.67778	.0371468	.0606150	.0983906	.1605506	.0957621	.0964306	.3090980	.3061939
-.64005	.16567	.04576	.05133	-.15031	.80140	.0274478	.0513345	.0686618	.1284157	.1005146	.1046673	.3213889	.3274546
-.78720	.14250	.03918	.04361	-.13246	.92776	.0203068	.0436064	.0478102	.1026667	.1040282	.1116525	.3299583	.3444564
-.93435	.12264	.03359	.03713	-.11632	1.05663	.0150395	.0371342	.0331959	.0819644	.1066287	.1175930	.3359183	.3580406
-1.08150	.10559	.02882	.03169	-.10185	1.18775	.0111484	.0316883	.0229667	.0652810	.1085555	.1226566	.3400505	.3688742
-1.22865	.09094	.02476	.02709	-.08898	1.32088	.0082701	.0270879	.0158203	.0518178	.1099842	.1269811	.3429042	.3774897
-1.37580	.07835	.02128	.02319	-.07759	1.45579	.0061389	.0231890	.0108400	.0409471	.1110444	.1306802	.3448657	.3843149
-1.52295	.06752	.01830	.01988	-.06755	1.59227	.0045593	.0198755	.0073799	.0321715	.1118315	.1338487	.3462063	.3896946
-1.67010	.05820	.01575	.01705	-.05874	1.73015	.0033877	.0170530	.0049849	.0250935	.1124162	.1365657	.3471160	.3939078
-1.81724	.05018	.01356	.01464	-.05102	1.86923	.0025181	.0146441	.0033348	.0193939	.1128507	.1388978	.3477281	.3971810
-1.96439	.04327	.01168	.01258	-.04427	2.00938	.0018724	.0125848	.0022041	.0148148	.1131737	.1409012	.3481357	.3996979
-2.11154	.03732	.01006	.01082	-.03838	2.15046	.0013926	.0108219	.0014345	.0111471	.1134139	.1426233	.3484034	.4016080
-2.25869	.03219	.00867	.00931	-.03326	2.29235	.0010360	.0093109	.0009147	.0082206	.1135926	.1441046	.3485762	.4030330
-2.40584	.02777	.00747	.00801	-.02881	2.43494	.0007709	.0080146	.0005672	.0058967	.1137256	.1453793	.3486852	.4040717
-2.55299	.02395	.00644	.00690	-.02493	2.57814	.0005737	.0069014	.0003377	.0040622	.1138245	.1464768	.3487518	.4048044
-2.70014	.02067	.00556	.00594	-.02158	2.72188	.0004271	.0059448	.0001885	.0026243	.1138981	.1474219	.3487905	.4052964
-2.84729	.01783	.00479	.00512	-.01866	2.86607	.0003179	.0051223	.0000936	.0015075	.1139530	.1482362	.3488113	.4056004
-2.99444	.01539	.00413	.00441	-.01614	3.01067	.0002367	.0044147	.0000348	.0006496	.1139938	.1489379	.3488207	.4057591
-3.14159	.01328	.00357	.00381	-.01395	3.15561	.0001763	.0038056	.0000000	.0000000	.1140242	.1495427	.3488233	.4058069

UTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30465	.38575	.24763	.29400	-.19618	.00037	.1488054	.2940000	.5128199	1.0131960	.0000000	.0000000	.0000000	.0000000
.16106	.33295	.20982	.24614	-.19903	.11545	.1108526	.2461443	.3661076	.8129287	.0186426	.0387806	.0631042	.1311099
.01747	.28740	.17848	.20692	-.19267	.23084	.0825997	.2069203	.2609373	.6536733	.0325319	.0713092	.1081240	.2364072
-.12613	.24815	.15228	.17463	-.18118	.34755	.0615787	.1746322	.1856885	.5265973	.0428834	.0987034	.1401902	.3211468
-.26972	.21433	.13026	.14791	-.16712	.46611	.0459354	.1479105	.1319206	.4247799	.0506026	.1218610	.1629936	.3894526
-.41332	.18517	.11164	.12567	-.15206	.58679	.0342876	.1256738	.0935462	.3428731	.0563623	.1415034	.1791813	.4445676
-.55691	.16003	.09585	.10707	-.13700	.70963	.0256088	.1070735	.0661908	.2767510	.0606627	.1582139	.1906499	.4890546
-.70050	.13834	.08241	.09144	-.12252	.83460	.0191375	.0914417	.0467164	.2232175	.0638754	.1724667	.1987563	.5249508
-.84410	.11962	.07093	.07825	-.10894	.96159	.0143088	.0782503	.0328744	.1797799	.0662767	.1846500	.2044707	.5538847
-.98769	.10346	.06111	.06708	-.09643	1.09045	.0107033	.0670780	.0230538	.1444794	.0680725	.1950841	.2084861	.5771654
-1.13128	.08950	.05269	.05759	-.08505	1.22103	.0080095	.0575859	.0161016	.1157655	.0694160	.2040346	.2112974	.5958502
-1.27488	.07743	.04546	.04950	-.07479	1.35316	.0059958	.0494996	.0111925	.0924016	.0704215	.2117230	.2132570	.6107959
-1.41847	.06701	.03925	.04259	-.06562	1.48668	.0044898	.0425948	.0077365	.0733960	.0711744	.2183351	.2146160	.6226997
-1.56206	.05799	.03390	.03669	-.05746	1.62145	.0033630	.0366871	.0053119	.0579483	.0717382	.2240272	.2155529	.6321297
-1.70566	.05019	.02929	.03162	-.05023	1.75732	.0025195	.0316238	.0036179	.0454098	.0721605	.2289317	.2161940	.6395505
-1.84925	.04345	.02532	.02728	-.04385	1.89417	.0018880	.0272779	.0024400	.0352524	.0724770	.2331607	.2166289	.6453418
-1.99284	.03762	.02189	.02354	-.03824	2.03188	.0014151	.0235430	.0016256	.0270449	.0727141	.2368095	.2169208	.6498146
2.13644	.03257	.01893	.02033	-.03331	2.17035	.0010607	.0203296	.0010662	.0204344	.0728919	.2399594	.2171141	.6532234
-2.28003	.02820	.01638	.01756	-.02900	2.30947	.0007952	.0175624	.0006852	.0151311	.0730251	.2426799	.2172398	.6557769
-2.42362	.02442	.01417	.01518	-.02522	2.44918	.0005963	.0151775	.0004281	.0108970	.0731250	.2450305	.2173197	.6576456
-2.56722	.02115	.01226	.01312	-.02193	2.58939	.0004471	.0131207	.0002568	.0075362	.0731999	.2470623	.2173689	.6589691
-2.71081	.01831	.01061	.01135	-.01905	2.73005	.0003353	.0113457	.0001444	.0048875	.0732561	.2488189	.2173977	.6598611
-2.85441	.01586	.00919	.00981	-.01655	2.87109	.0002515	.0098132	.0000722	.0028182	.0732982	.2503380	.2174133	.6604143
-2.99800	.01373	.00795	.00849	-.01437	3.01247	.0001886	.0084895	.0000271	.0012190	.0733298	.2516521	.2174204	.6607042
3.14159	.01189	.00688	.00735	-.01247	3.15414	.0001415	.0073456	.0000000	.0000000	.0733535	.2527890	.2174224	.6607917

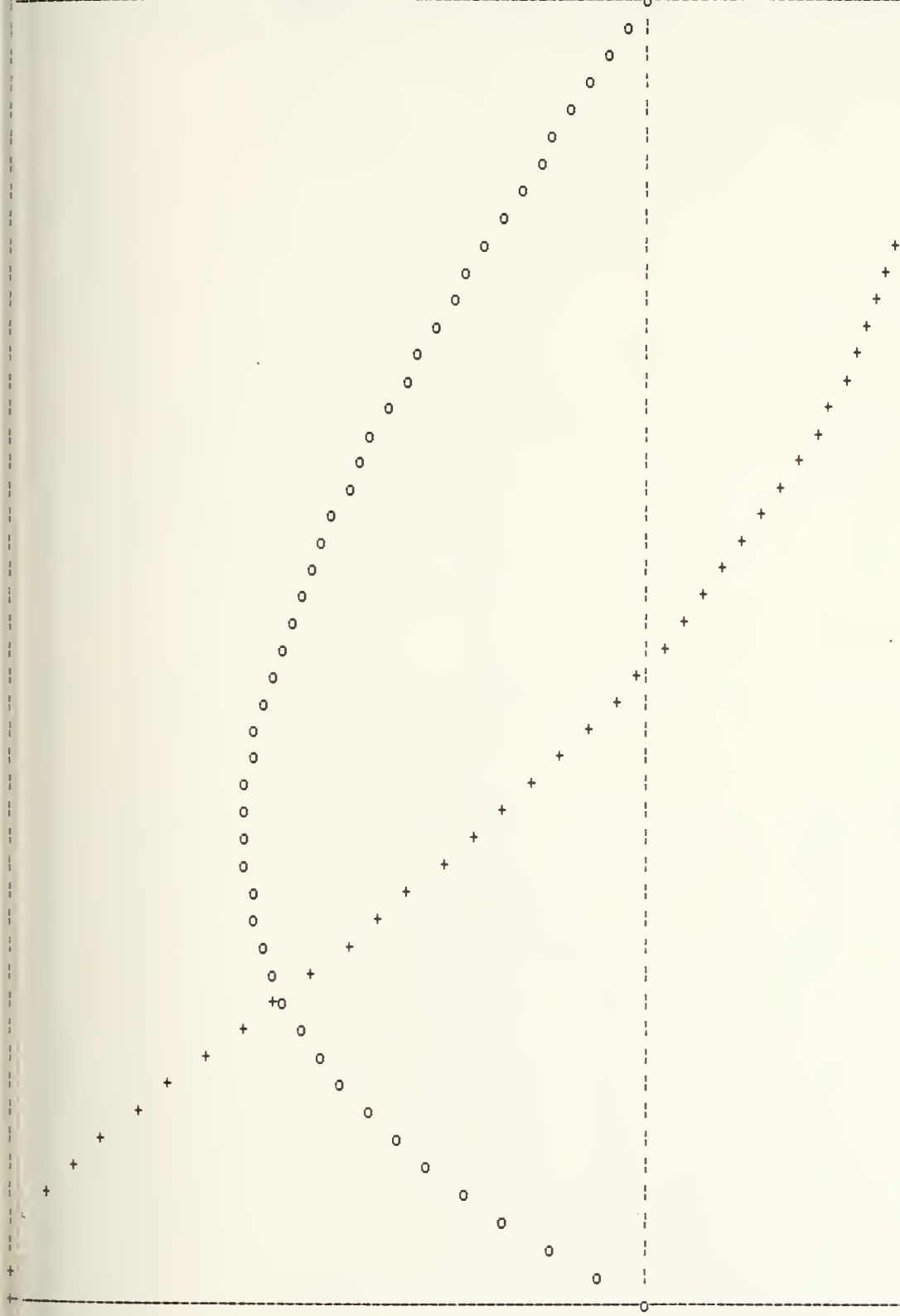
WATER SURFACE ELEVATION

H=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

ELEV. VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.27508	2.95512	3.14159	180.00
-.27470	2.89355	3.07614	176.25
-.27355	2.83199	3.01069	172.50
-.27166	2.77042	2.94524	168.75
-.26902	2.70886	2.87979	165.00
-.26566	2.64729	2.81434	161.25
-.26158	2.58573	2.74889	157.50
-.25677	2.52416	2.68344	153.75
-.25123	2.46260	2.61799	150.00
-.24494	2.40103	2.55254	146.25
-.23788	2.33947	2.48709	142.50
-.23002	2.27790	2.42164	138.75
-.22135	2.21634	2.35619	135.00
-.21187	2.15477	2.29074	131.25
-.20160	2.09321	2.22529	127.50
-.19056	2.03164	2.15984	123.75
-.17878	1.97008	2.09440	120.00
-.16629	1.90851	2.02895	116.25
-.15312	1.84695	1.96350	112.50
-.13927	1.78538	1.89805	108.75
-.12474	1.72382	1.83260	105.00
-.10950	1.66225	1.76715	101.25
-.09351	1.60069	1.70170	97.50
-.07672	1.53912	1.63625	93.75
-.05910	1.47756	1.57080	90.00
-.04062	1.41599	1.50535	86.25
-.02128	1.35443	1.43990	82.50
-.00113	1.29286	1.37445	78.75
.01979	1.23130	1.30900	75.00
.04138	1.16973	1.24355	71.25
.06356	1.10817	1.17810	67.50
.08623	1.04660	1.11265	63.75
.10933	.98504	1.04720	60.00
.13281	.92347	.98175	56.25
.15664	.86191	.91630	52.50
.18081	.80034	.85085	48.75
.20532	.73878	.78540	45.00
.23011	.67721	.71995	41.25
.25508	.61565	.65450	37.50
.28003	.55408	.58905	33.75
.30465	.49252	.52360	30.00
.32853	.43095	.45815	26.25
.35113	.36939	.39270	22.50
.37184	.30782	.32725	18.75
.39000	.24626	.26180	15.00
.40495	.18469	.19635	11.25
.41611	.12313	.13090	7.50
.42301	.06156	.06545	3.75
.42534	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

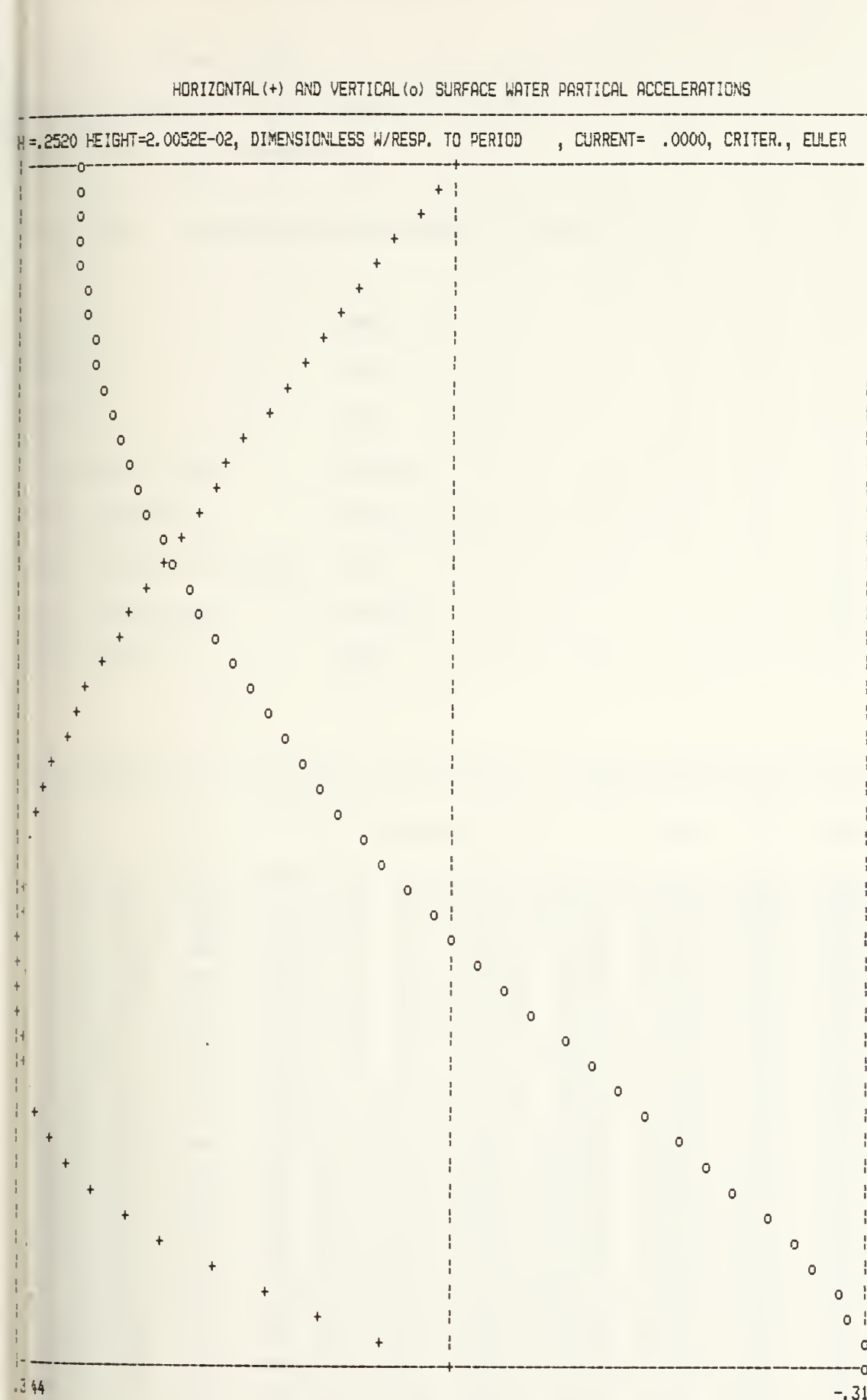
H=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.23318	.00000	3.14159	180.00
-.23280	.01479	3.07614	176.25
-.23169	.02957	3.01069	172.50
-.22983	.04429	2.94524	168.75
-.22723	.05895	2.87979	165.00
-.22387	.07352	2.81434	161.25
-.21975	.08797	2.74889	157.50
-.21488	.10228	2.68344	153.75
-.20924	.11643	2.61799	150.00
-.20286	.13038	2.55254	146.25
-.19571	.14413	2.48709	142.50
-.18781	.15764	2.42164	138.75
-.17916	.17089	2.35619	135.00
-.16974	.18386	2.29074	131.25
-.15954	.19651	2.22529	127.50
-.14857	.20882	2.15984	123.75
-.13680	.22073	2.09440	120.00
-.12422	.23222	2.02895	116.25
-.11084	.24324	1.96350	112.50
-.09664	.25374	1.89805	108.75
-.08163	.26369	1.83260	105.00
-.06579	.27304	1.76715	101.25
-.04914	.28177	1.70170	97.50
-.03167	.28984	1.63625	93.75
-.01336	.29720	1.57080	90.00
.00578	.30382	1.50535	86.25
.02578	.30963	1.43990	82.50
.04664	.31456	1.37445	78.75
.06836	.31853	1.30900	75.00
.09095	.32143	1.24355	71.25
.11439	.32315	1.17810	67.50
.13867	.32357	1.11265	63.75
.16374	.32257	1.04720	60.00
.18958	.32003	.98175	56.25
.21613	.31583	.91630	52.50
.24334	.30984	.85085	48.75
.27114	.30193	.78540	45.00
.29945	.29195	.71995	41.25
.32814	.27972	.65450	37.50
.35700	.26503	.58905	33.75
.38575	.24763	.52360	30.00
.41397	.22727	.45815	26.25
.44110	.20373	.39270	22.50
.46640	.17686	.32725	18.75
.48900	.14665	.26180	15.00
.50797	.11328	.19635	11.25
.52236	.07721	.13090	7.50
.53136	.03913	.06545	3.75
.53443	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

H =.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax *1/G	Ay *1/G	DIST. *K	ANGLE DEGREES
.00000	.29308	3.14159	180.00
.01476	.29277	3.07614	176.25
.02950	.29186	3.01069	172.50
.04420	.29033	2.94524	168.75
.05886	.28818	2.87979	165.00
.07343	.28542	2.81434	161.25
.08792	.28202	2.74889	157.50
.10228	.27801	2.68344	153.75
.11652	.27337	2.61799	150.00
.13061	.26811	2.55254	146.25
.14452	.26225	2.48709	142.50
.15825	.25578	2.42164	138.75
.17178	.24871	2.35619	135.00
.18508	.24103	2.29074	131.25
.19813	.23275	2.22529	127.50
.21091	.22384	2.15984	123.75
.22338	.21431	2.09440	120.00
.23550	.20415	2.02895	116.25
.24724	.19333	1.96350	112.50
.25857	.18188	1.89805	108.75
.26945	.16979	1.83260	105.00
.27986	.15706	1.76715	101.25
.28976	.14371	1.70170	97.50
.29913	.12975	1.63625	93.75
.30793	.11520	1.57080	90.00
.31613	.10004	1.50535	86.25
.32368	.08428	1.43990	82.50
.33050	.06793	1.37445	78.75
.33652	.05095	1.30900	75.00
.34163	.03335	1.24355	71.25
.34571	.01512	1.17810	67.50
.34863	-.00373	1.11265	63.75
.35026	-.02321	1.04720	60.00
.35044	-.04328	.98175	56.25
.34901	-.06392	.91630	52.50
.34581	-.08508	.85085	48.75
.34063	-.10670	.78540	45.00
.33321	-.12874	.71995	41.25
.32324	-.15108	.65450	37.50
.31033	-.17362	.58905	33.75
.29400	-.19618	.52360	30.00
.27371	-.21848	.45815	26.25
.24892	-.24015	.39270	22.50
.21912	-.26063	.32725	18.75
.18403	-.27921	.26180	15.00
.14374	-.29505	.19635	11.25
.09881	-.30723	.13090	7.50
.05036	-.31494	.06545	3.75
.00000	-.31758	.00000	.00

EADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

TH: DEEP , HEIGHT/DEPTH= .2520

E HEIGHT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

RRENT CRITERION: EULER , MAGNITUDE= .00

UTION OF ORDER 9 NON-DIMENSIONALIZED BY WAVE NUMBER, 1 HEIGHT STEP(S).

VE HEIGHT	.70042
VE PERIOD	5.9102
VE SPEED	1.0631
AN EULERIAN FLUID SPEED	4.25754E-22
AN MASS TRANSPORT SPEED	4.25754E-22
AN FLUID SPEED RELATIVE TO WAVE	1.0631
LUME FLUX DUE TO WAVES	5.54418E-02
RNOULLI CONSTANT	.56509

UTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.42534	.53443	.00000	.00000	-.31764	.00000	.2856148	.0000000	1.0187701	.0000000	.0000000	.0000000	.0000000	.0000000
.27672	.45311	.00000	.00000	-.30359	.10232	.2053074	.0000000	.7018054	.0000000	.0364810	.0000000	.1278580	.0000000
.12810	.38544	.00000	.00000	-.28188	.20738	.1485618	.0000000	.4857513	.0000000	.0627775	.0000000	.2161068	.0000000
-.02052	.32869	.00000	.00000	-.25697	.31594	.1080387	.0000000	.3371962	.0000000	.0818457	.0000000	.2772610	.0000000
-.16915	.28084	.00000	.00000	-.23135	.42827	.0788725	.0000000	.2344443	.0000000	.0957353	.0000000	.3197402	.0000000
-.31777	.24032	.00000	.00000	-.20643	.54438	.0577548	.0000000	.1630896	.0000000	.1058883	.0000000	.3492815	.0000000
-.46639	.20590	.00000	.00000	-.18298	.66408	.0423938	.0000000	.1134120	.0000000	.1133304	.0000000	.3698286	.0000000
-.61501	.17658	.00000	.00000	-.16136	.78714	.0311792	.0000000	.0787769	.0000000	.1187977	.0000000	.3841104	.0000000
-.76363	.15155	.00000	.00000	-.14173	.91326	.0229680	.0000000	.0546168	.0000000	.1228215	.0000000	.3940230	.0000000
-.91226	.13016	.00000	.00000	-.12409	1.04216	.0169414	.0000000	.0377681	.0000000	.1257872	.0000000	.4008883	.0000000
-1.06088	.11185	.00000	.00000	-.10837	1.17353	.0125098	.0000000	.0260293	.0000000	.1279757	.0000000	.4056291	.0000000
-1.20950	.09616	.00000	.00000	-.09444	1.30710	.0092458	.0000000	.0178638	.0000000	.1295924	.0000000	.4088909	.0000000
-1.35812	.08270	.00000	.00000	-.08217	1.44262	.0068387	.0000000	.0121966	.0000000	.1307877	.0000000	.4111247	.0000000
-1.50675	.07114	.00000	.00000	-.07138	1.57985	.0050615	.0000000	.0082747	.0000000	.1316720	.0000000	.4126459	.0000000
-1.65537	.06122	.00000	.00000	-.06194	1.71858	.0037481	.0000000	.0055706	.0000000	.1323266	.0000000	.4136748	.0000000
-1.80399	.05270	.00000	.00000	-.05369	1.85862	.0027768	.0000000	.0037143	.0000000	.1328115	.0000000	.4143648	.0000000
-1.95261	.04537	.00000	.00000	-.04650	1.99981	.0020581	.0000000	.0024470	.0000000	.1331708	.0000000	.4148226	.0000000
-2.10124	.03906	.00000	.00000	-.04025	2.14200	.0015258	.0000000	.0015874	.0000000	.1334371	.0000000	.4151224	.0000000
-2.24986	.03364	.00000	.00000	-.03481	2.28505	.0011316	.0000000	.0010091	.0000000	.1336346	.0000000	.4153154	.0000000
-2.39848	.02897	.00000	.00000	-.03010	2.42886	.0008394	.0000000	.0006238	.0000000	.1337811	.0000000	.4154367	.0000000
-2.54710	.02496	.00000	.00000	-.02601	2.57332	.0006228	.0000000	.0003702	.0000000	.1338897	.0000000	.4155106	.0000000
-2.69573	.02150	.00000	.00000	-.02247	2.71835	.0004621	.0000000	.0002060	.0000000	.1339703	.0000000	.4155534	.0000000
-2.84435	.01852	.00000	.00000	-.01940	2.86386	.0003430	.0000000	.0001019	.0000000	.1340302	.0000000	.4155763	.0000000
-2.99297	.01596	.00000	.00000	-.01675	3.00980	.0002546	.0000000	.0000378	.0000000	.1340746	.0000000	.4155867	.0000000
-3.14159	.01375	.00000	.00000	-.01446	3.15611	.0001890	.0000000	.0000000	.0000000	.1341075	.0000000	.4155895	.0000000

UTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.38948	.48870	.14654	.18390	-.27913	-.00009	.2388283	.1839030	.8433200	.6493747	.0000000	.0000000	.0000000	.0000000
.24235	.41676	.12232	.14980	-.27148	.10638	.1736920	.1497988	.5877640	.5069107	.0303466	.0245484	.1052763	.0850610
.09522	.35616	.10282	.12327	-.25507	.21470	.1268529	.1232741	.4105996	.3990157	.0524559	.0446368	.1787199	.1517046
-.05190	.30489	.08688	.10230	-.23454	.32578	.0929588	.1022967	.2872138	.3160649	.0686262	.0612307	.2300539	.2043088
-.19903	.26136	.07371	.08547	-.21256	.44001	.0683079	.0854657	.2010000	.2514878	.0804896	.0750432	.2659688	.2460602
-.34616	.22429	.06273	.07180	-.19068	.55748	.0503062	.0717972	.1406276	.2007042	.0892153	.0866121	.2911003	.2793253
-.49329	.19266	.05351	.06059	-.16975	.67811	.0371167	.0605852	.0982964	.1604480	.0956465	.0963507	.3086765	.3058931
-.64042	.16561	.04574	.05131	-.15026	.80172	.0274269	.0513116	.0685995	.1283393	.1003946	.1045823	.3209541	.3271374
-.78754	.14245	.03916	.04359	-.13242	.92807	.0202923	.0435886	.0477692	.1026097	.1039050	.1115635	.3295146	.3441270
-.93467	.12260	.03357	.03712	-.11628	1.05692	.0150295	.0371204	.0331690	.0819217	.1065034	.1175008	.3354687	.3577018
-1.08180	.10555	.02881	.03168	-.10182	1.18803	.0111415	.0316775	.0229492	.0652491	.1084287	.1225618	.3395970	.3685283
-1.22893	.09091	.02475	.02708	-.08896	1.32114	.0082654	.0270795	.0158090	.0517940	.1098563	.1268842	.3424482	.3771385
-1.37606	.07833	.02127	.02318	-.07757	1.45603	.0061356	.0231824	.0108327	.0409294	.1109157	.1305817	.3444081	.3839596
-1.52318	.06751	.01830	.01987	-.06754	1.59250	.0045571	.0198704	.0073752	.0321585	.1117023	.1337488	.3457475	.3893362
-1.67031	.05819	.01575	.01705	-.05872	1.73036	.0033862	.0170491	.0049821	.0250840	.1122867	.1364648	.3466566	.3935472
-1.81744	.05017	.01356	.01464	-.05101	1.86943	.0025171	.0146411	.0033331	.0193871	.1127209	.1387960	.3472683	.3968187
-1.96457	.04326	.01168	.01258	-.04426	2.00956	.0018717	.0125825	.0022031	.0148100	.1130438	.1407987	.3476755	.3993344
-2.11170	.03731	.01006	.01082	-.03838	2.15062	.0013922	.0108202	.0014338	.0111437	.1132839	.1425203	.3479431	.4012436
-2.25882	.03218	.00867	.00931	-.03326	2.29248	.0010358	.0093097	.0009143	.0082183	.1134625	.1440012	.3481158	.4026680
-2.40595	.02776	.00747	.00801	-.02880	2.43505	.0007708	.0080137	.0005670	.0058952	.1135954	.1452755	.3482248	.4037062
-2.55308	.02395	.00644	.00690	-.02493	2.57823	.0005737	.0069008	.0003376	.0040612	.1136943	.1463727	.3482913	.4044386
-2.70021	.02066	.00556	.00594	-.02157	2.72195	.0004270	.0059444	.0001885	.0026238	.1137679	.1473176	.3483300	.4049304
-2.84734	.01783	.00479	.00512	-.01866	2.86612	.0003179	.0051221	.0000935	.0015072	.1138227	.1481317	.3483508	.4052343
-2.99446	.01539	.00413	.00441	-.01614	3.01069	.0002367	.0044146	.0000348	.0006495	.1138635	.1488333	.3483602	.4053930
-3.14159	.01328	.00357	.00381	-.01395	3.15561	.0001763	.0038056	.0000000	.0000000	.1138939	.1494380	.3483628	.4054407

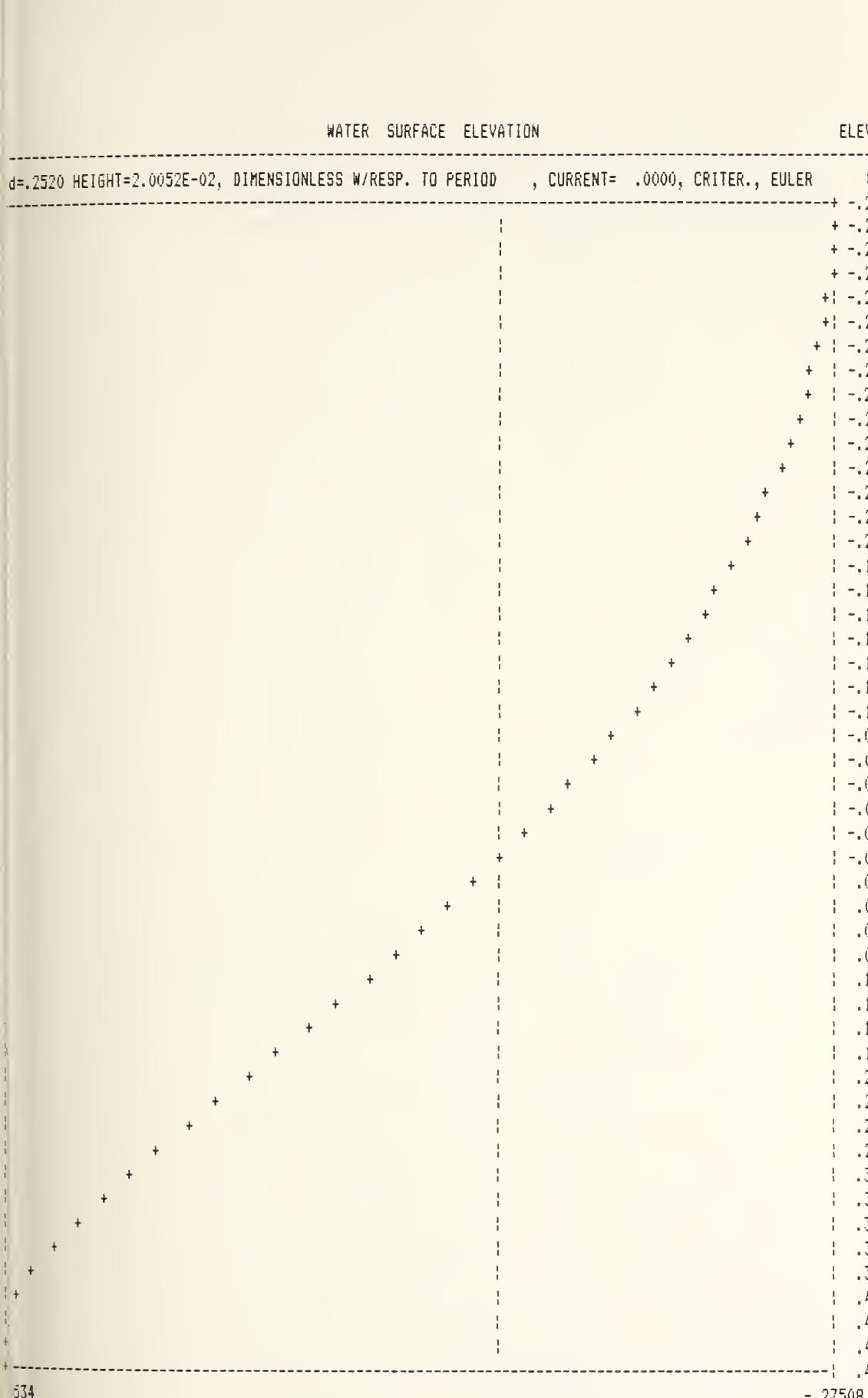
TION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30488	.38585	.24767	.29398	-.19621	.00020	.1488801	.2939838	.5131118	1.0132083	.0000000	.0000000	.0000000	.0000000
.16128	.33302	.20987	.24617	-.19906	.11528	.1109052	.2461676	.3663060	.8130605	.0186530	.0387837	.0631436	.1311290
.01768	.28747	.17851	.20695	-.19270	.23067	.0826367	.2069516	.2610718	.6538163	.0325496	.0713184	.1081904	.2364531
-.12593	.24820	.15231	.17466	-.18121	.34739	.0616048	.1746620	.1857797	.5267226	.0429064	.0987189	.1402750	.3212177
-.26953	.21437	.13028	.14794	-.16714	.46596	.0459538	.1479363	.1319823	.4248826	.0506293	.1218820	.1630908	.3895445
-.41313	.18520	.11167	.12570	-.15208	.58664	.0343006	.1256954	.0935879	.3429550	.0563917	.1415292	.1792871	.4446765
-.55673	.16006	.09587	.10709	-.13702	.70949	.0256180	.1070912	.0662189	.2768156	.0606939	.1582436	.1907615	.4891770
-.70034	.13836	.08242	.09146	-.12254	.83446	.0191440	.0914562	.0467354	.2232680	.0639079	.1724997	.1988718	.5250838
-.84394	.11964	.07094	.07826	-.10895	.96146	.0143133	.0782621	.0328870	.1798190	.0663102	.1846857	.2045888	.5540261
-.98754	.10347	.06112	.06709	-.09644	1.09032	.0107065	.0670875	.0230622	.1445096	.0681067	.1951220	.2086061	.5773134
1.13115	.08951	.05270	.05759	-.08506	1.22091	.0080117	.0575935	.0161071	.1157886	.0694507	.2040743	.2114185	.5960032
-1.27475	.07744	.04547	.04951	-.07480	1.35305	.0059974	.0495057	.0111961	.0924193	.0704565	.2117642	.2133789	.6109529
-1.41835	.06701	.03925	.04260	-.06563	1.48658	.0044909	.0425996	.0077388	.0734093	.0712096	.2183775	.2147385	.6228597
-1.56196	.05800	.03390	.03669	-.05746	1.62136	.0033637	.0366909	.0053134	.0579583	.0717736	.2240707	.2156757	.6322921
-1.70556	.05020	.02929	.03163	-.05023	1.75724	.0025200	.0316269	.0036189	.0454172	.0721961	.2289761	.2163170	.6397146
-1.84916	.04346	.02532	.02728	-.04385	1.89410	.0018884	.0272803	.0024406	.0352578	.0725126	.2332057	.2167521	.6455072
-1.99277	.03762	.02189	.02354	-.03824	2.03181	.0014153	.0235448	.0016259	.0270488	.0727498	.2368550	.2170441	.6499809
-2.13637	.03257	.01893	.02033	-.03331	2.17029	.0010609	.0203310	.0010664	.0204372	.0729276	.2400054	.2172374	.6533905
-2.27997	.02820	.01638	.01756	-.02900	2.30942	.0007953	.0175635	.0006853	.0151330	.0730609	.2427262	.2173632	.6559445
-2.42358	.02442	.01417	.01518	-.02523	2.44914	.0005963	.0151783	.0004282	.0108983	.0731608	.2450771	.2174431	.6578136
-2.56718	.02115	.01226	.01312	-.02193	2.58936	.0004472	.0131212	.0002569	.0075370	.0732357	.2471091	.2174923	.6591372
-2.71078	.01831	.01061	.01135	-.01905	2.73003	.0003353	.0113461	.0001445	.0048880	.0732919	.2488659	.2175211	.6600294
-2.85439	.01586	.00919	.00981	-.01655	2.87108	.0002515	.0098134	.0000722	.0028185	.0733340	.2503852	.2175367	.6605827
-2.99799	.01373	.00795	.00849	-.01437	3.01246	.0001886	.0084896	.0000271	.0012191	.0733656	.2516994	.2175438	.6608726
-3.14159	.01189	.00688	.00735	-.01247	3.15414	.0001415	.0073456	.0000000	.0000000	.0733893	.2528363	.2175458	.6609602

WATER SURFACE ELEVATION

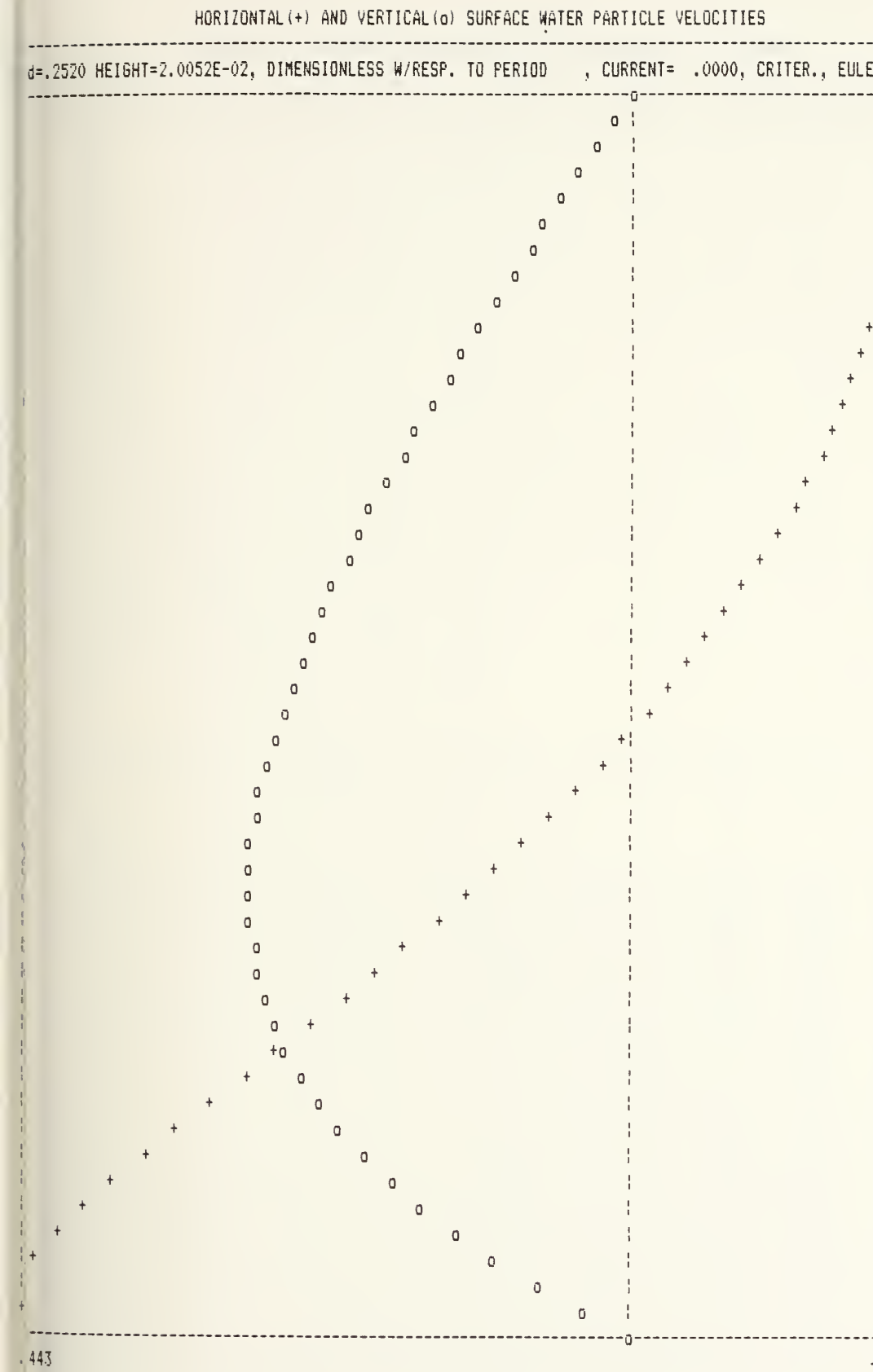
d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

ELEV.VS.	TIME	DIST.	ANGLE
‡K	(K‡G)^.5	‡K	DEGREES
-.27508	2.95512	3.14159	180.00
-.27470	2.89356	3.07614	176.25
-.27357	2.83199	3.01069	172.50
-.27170	2.77043	2.94524	168.75
-.26908	2.70886	2.87979	165.00
-.26573	2.64730	2.81434	161.25
-.26163	2.58573	2.74889	157.50
-.25679	2.52417	2.68344	153.75
-.25119	2.46260	2.61799	150.00
-.24482	2.40104	2.55254	146.25
-.23768	2.33947	2.48709	142.50
-.22978	2.27791	2.42164	138.75
-.22112	2.21634	2.35619	135.00
-.21171	2.15478	2.29074	131.25
-.20157	2.09321	2.22529	127.50
-.19069	2.03165	2.15984	123.75
-.17908	1.97008	2.09440	120.00
-.16672	1.90852	2.02895	116.25
-.15358	1.84695	1.96350	112.50
-.13966	1.78539	1.89805	108.75
-.12494	1.72382	1.83260	105.00
-.10943	1.66226	1.76715	101.25
-.09314	1.60069	1.70170	97.50
-.07612	1.53913	1.63625	93.75
-.05838	1.47756	1.57080	90.00
-.03994	1.41600	1.50535	86.25
-.02083	1.35443	1.43990	82.50
-.00102	1.29287	1.37445	78.75
.01949	1.23130	1.30900	75.00
.04073	1.16974	1.24355	71.25
.06269	1.10817	1.17810	67.50
.08534	1.04661	1.11265	63.75
.10863	.98504	1.04720	60.00
.13247	.92348	.98175	56.25
.15675	.86191	.91630	52.50
.18135	.80035	.85085	48.75
.20617	.73878	.78540	45.00
.23107	.67722	.71995	41.25
.25595	.61565	.65450	37.50
.28063	.55409	.58905	33.75
.30488	.49252	.52360	30.00
.32840	.43096	.45815	26.25
.35072	.36939	.39270	22.50
.37130	.30783	.32725	18.75
.38948	.24626	.26180	15.00
.40457	.18470	.19635	11.25
.41591	.12313	.13090	7.50
.42295	.06157	.06545	3.75
.42534	.00000	.00000	.00



HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



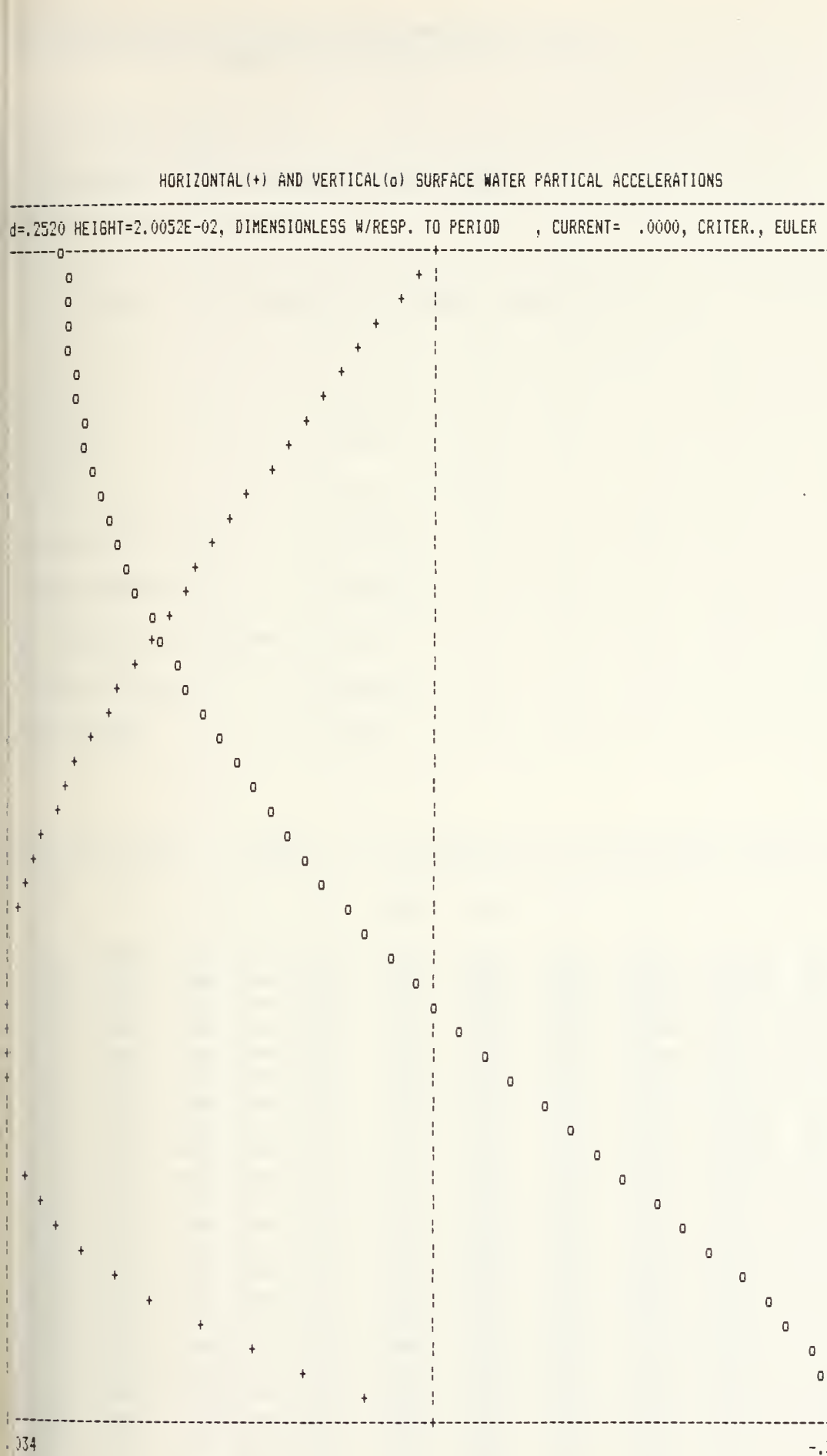
U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.23318	.00000	3.14159	180.00
-.23281	.01479	3.07614	176.25
-.23169	.02957	3.01069	172.50
-.22983	.04429	2.94524	168.75
-.22721	.05895	2.87979	165.00
-.22385	.07352	2.81434	161.25
-.21974	.08797	2.74889	157.50
-.21487	.10228	2.68344	153.75
-.20926	.11643	2.61799	150.00
-.20288	.13040	2.55254	146.25
-.19575	.14415	2.48709	142.50
-.18786	.15767	2.42164	138.75
-.17920	.17093	2.35619	135.00
-.16977	.18389	2.29074	131.25
-.15955	.19652	2.22529	127.50
-.14855	.20879	2.15984	123.75
-.13675	.22067	2.09440	120.00
-.12417	.23213	2.02895	116.25
-.11078	.24313	1.96350	112.50
-.09660	.25365	1.89805	108.75
-.08161	.26364	1.83260	105.00
-.06580	.27307	1.76715	101.25
-.04916	.28188	1.70170	97.50
-.03169	.29001	1.63625	93.75
-.01338	.29741	1.57080	90.00
.00578	.30402	1.50535	86.25
.02579	.30977	1.43990	82.50
.04664	.31459	1.37445	78.75
.06835	.31843	1.30900	75.00
.09090	.32122	1.24355	71.25
.11431	.32286	1.17810	67.50
.13856	.32327	1.11265	63.75
.16364	.32234	1.04720	60.00
.18953	.31992	.98175	56.25
.21616	.31587	.91630	52.50
.24347	.31002	.85085	48.75
.27138	.30221	.78540	45.00
.29975	.29226	.71995	41.25
.32844	.27999	.65450	37.50
.35723	.26519	.58905	33.75
.38585	.24767	.52360	30.00
.41391	.22720	.45815	26.25
.44089	.20360	.39270	22.50
.46610	.17672	.32725	18.75
.48870	.14654	.26180	15.00
.50773	.11323	.19635	11.25
.52223	.07719	.13090	7.50
.53133	.03914	.06545	3.75
.53443	.00000	.00000	.00

.443

-.23318

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax	Ay	DIST.	ANGLE
‡1/G	‡1/G	‡K	DEGREES
.00000	.29308	3.14159	180.00
.01476	.29277	3.07614	176.25
.02950	.29185	3.01069	172.50
.04420	.29032	2.94524	168.75
.05885	.28817	2.87979	165.00
.07343	.28540	2.81434	161.25
.08791	.28201	2.74889	157.50
.10229	.27800	2.68344	153.75
.11653	.27338	2.61799	150.00
.13062	.26815	2.55254	146.25
.14455	.26231	2.48709	142.50
.15829	.25585	2.42164	138.75
.17182	.24878	2.35619	135.00
.18511	.24108	2.29074	131.25
.19814	.23276	2.22529	127.50
.21089	.22381	2.15984	123.75
.22332	.21423	2.09440	120.00
.23541	.20403	2.02895	116.25
.24714	.19321	1.96350	112.50
.25849	.18178	1.89805	108.75
.26941	.16974	1.83260	105.00
.27989	.15708	1.76715	101.25
.28987	.14380	1.70170	97.50
.29930	.12989	1.63625	93.75
.30814	.11535	1.57080	90.00
.31633	.10018	1.50535	86.25
.32381	.08437	1.43990	82.50
.33053	.06794	1.37445	78.75
.33641	.05089	1.30900	75.00
.34140	.03324	1.24355	71.25
.34541	.01499	1.17810	67.50
.34832	-.00386	1.11265	63.75
.35002	-.02330	1.04720	60.00
.35034	-.04332	.98175	56.25
.34909	-.06390	.91630	52.50
.34605	-.08503	.85085	48.75
.34098	-.10665	.78540	45.00
.33358	-.12870	.71995	41.25
.32354	-.15108	.65450	37.50
.31048	-.17365	.58905	33.75
.29398	-.19621	.52360	30.00
.27355	-.21849	.45815	26.25
.24868	-.24012	.39270	22.50
.21890	-.26056	.32725	18.75
.18390	-.27913	.26180	15.00
.14372	-.29499	.19635	11.25
.09886	-.30722	.13090	7.50
.05041	-.31498	.06545	3.75
.00000	-.31764	.00000	.00

EADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

TH: DEEP , HEIGHT/DEPTH= .2520

E HEIGHT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

RRENT CRITERION: EULER , MAGNITUDE= .00

UTION OF ORDER 10 NON-DIMENSIONALIZED BY WAVE NUMBER, 1 HEIGHT STEP(S).

VE HEIGHT	.70042
VE PERIOD	5.9102
VE SPEED	1.0631
N EULERIAN FLUID SPEED	2.47675E-22
N MASS TRANSPORT SPEED	2.47675E-22
N FLUID SPEED RELATIVE TO WAVE	1.0631
UME FLUX DUE TO WAVES	5.54414E-02
NOULLI CONSTANT	.56509

TION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.42534	.53443	.00000	.00000	-.31764	.00000	.2856147	.0000000	1.0187699	.0000000	.0000000	.0000000	.0000000	.0000000
.27672	.45311	.00000	.00000	-.30359	.10232	.2053069	.0000000	.7018037	.0000000	.0364810	.0000000	.1278579	.0000000
.12810	.38544	.00000	.00000	-.28188	.20738	.1485615	.0000000	.4857505	.0000000	.0627774	.0000000	.2161065	.0000000
-.02052	.32869	.00000	.00000	-.25697	.31594	.1080385	.0000000	.3371959	.0000000	.0818456	.0000000	.2772606	.0000000
-.16914	.28084	.00000	.00000	-.23135	.42827	.0788724	.0000000	.2344442	.0000000	.0957352	.0000000	.3197398	.0000000
-.31777	.24032	.00000	.00000	-.20643	.54438	.0577548	.0000000	.1630896	.0000000	.1058881	.0000000	.3492810	.0000000
-.46639	.20590	.00000	.00000	-.18298	.66408	.0423938	.0000000	.1134120	.0000000	.1133303	.0000000	.3698282	.0000000
-.61501	.17658	.00000	.00000	-.16136	.78714	.0311793	.0000000	.0787769	.0000000	.1187976	.0000000	.3841100	.0000000
-.76363	.15155	.00000	.00000	-.14173	.91327	.0229680	.0000000	.0546169	.0000000	.1228213	.0000000	.3940226	.0000000
-.91226	.13016	.00000	.00000	-.12409	1.04216	.0169414	.0000000	.0377681	.0000000	.1257871	.0000000	.4008879	.0000000
1.06088	.11185	.00000	.00000	-.10837	1.17353	.0125098	.0000000	.0260293	.0000000	.1279756	.0000000	.4056288	.0000000
1.20950	.09616	.00000	.00000	-.09444	1.30710	.0092458	.0000000	.0178638	.0000000	.1295923	.0000000	.4088905	.0000000
1.35812	.08270	.00000	.00000	-.08217	1.44262	.0068387	.0000000	.0121966	.0000000	.1307876	.0000000	.4111243	.0000000
1.50675	.07114	.00000	.00000	-.07138	1.57985	.0050615	.0000000	.0082747	.0000000	.1316719	.0000000	.4126456	.0000000
1.65537	.06122	.00000	.00000	-.06194	1.71858	.0037481	.0000000	.0055706	.0000000	.1323265	.0000000	.4136744	.0000000
1.80399	.05270	.00000	.00000	-.05369	1.85862	.0027768	.0000000	.0037143	.0000000	.1328114	.0000000	.4143644	.0000000
1.95261	.04537	.00000	.00000	-.04650	1.99981	.0020581	.0000000	.0024470	.0000000	.1331707	.0000000	.4148223	.0000000
2.10124	.03906	.00000	.00000	-.04025	2.14200	.0015258	.0000000	.0015874	.0000000	.1334370	.0000000	.4151221	.0000000
2.24986	.03364	.00000	.00000	-.03481	2.28505	.0011316	.0000000	.0010091	.0000000	.1336345	.0000000	.4153150	.0000000
2.39848	.02897	.00000	.00000	-.03010	2.42886	.0008394	.0000000	.0006238	.0000000	.1337810	.0000000	.4154363	.0000000
2.54710	.02496	.00000	.00000	-.02601	2.57332	.0006228	.0000000	.0003702	.0000000	.1338896	.0000000	.4155102	.0000000
2.69573	.02150	.00000	.00000	-.02247	2.71835	.0004621	.0000000	.0002060	.0000000	.1339702	.0000000	.4155530	.0000000
2.84435	.01852	.00000	.00000	-.01940	2.86386	.0003430	.0000000	.0001019	.0000000	.1340301	.0000000	.4155759	.0000000
2.99297	.01596	.00000	.00000	-.01675	3.00981	.0002546	.0000000	.0000378	.0000000	.1340745	.0000000	.4155863	.0000000
3.14159	.01375	.00000	.00000	-.01446	3.15611	.0001890	.0000000	.0000000	.0000000	.1341074	.0000000	.4155891	.0000000

UTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

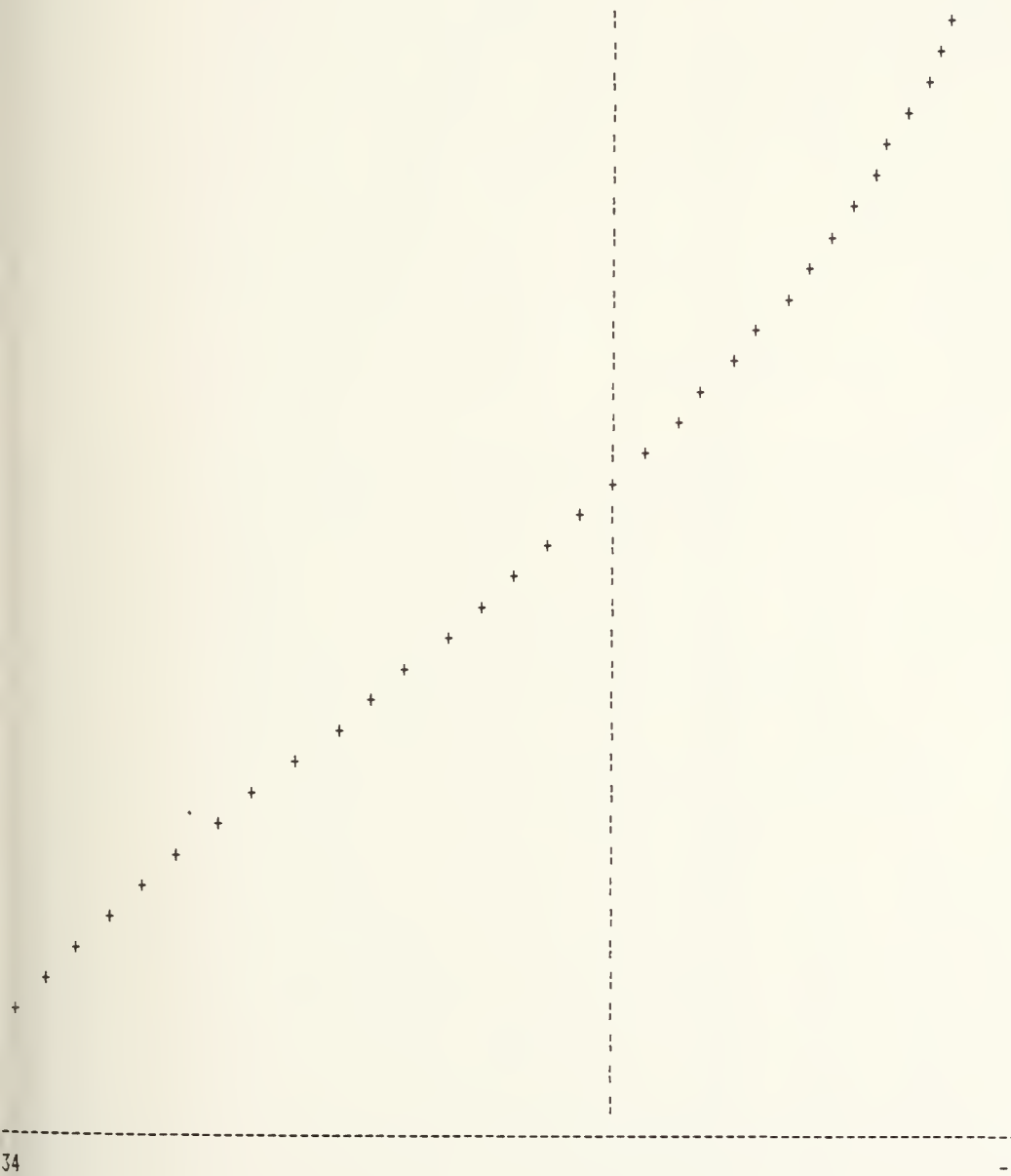
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.38940	.48866	.14653	.18388	-.27912	-.00004	.2387839	.1838770	.8431436	.6492678	.0000000	.0000000	.0000000	.0000000
.24227	.41673	.12231	.14978	-.27147	.10644	.1736622	.1497801	.5876497	.5068359	.0303405	.0245446	.1052525	.0850457
.09515	.35614	.10281	.12326	-.25506	.21476	.1268325	.1232606	.4105241	.3989628	.0524456	.0446301	.1786804	.1516783
-.05198	.30487	.08687	.10229	-.23453	.32584	.0929447	.1022868	.2871636	.3160269	.0686129	.0612219	.2300039	.2042746
-.19910	.26134	.07370	.08546	-.21255	.44006	.0682981	.0854582	.2009666	.2514601	.0804743	.0750328	.2659119	.2460202
-.34623	.22428	.06272	.07179	-.19067	.55754	.0502994	.0717915	.1406054	.2006837	.0891986	.0866005	.2910388	.2792810
-.49335	.19264	.05351	.06058	-.16975	.67816	.0371120	.0605808	.0982816	.1604326	.0956288	.0963381	.3086118	.3058455
-.64047	.16560	.04574	.05131	-.15026	.80177	.0274236	.0513082	.0685898	.1283278	.1003762	.1045689	.3208873	.3270874
-.78760	.14244	.03916	.04359	-.13241	.92812	.0202901	.0435859	.0477627	.1026010	.1038861	.1115495	.3294464	.3440751
-.93472	.12259	.03357	.03712	-.11628	1.05697	.0150280	.0371183	.0331648	.0819152	.1064842	.1174863	.3353997	.3576485
-1.08185	.10555	.02881	.03168	-.10182	1.18807	.0111404	.0316759	.0229464	.0652442	.1084092	.1225470	.3395273	.3684739
-1.22897	.09091	.02475	.02708	-.08895	1.32118	.0082647	.0270782	.0158072	.0517903	.1098367	.1268691	.3423781	.3770832
-1.37610	.07833	.02127	.02318	-.07757	1.45607	.0061351	.0231814	.0108316	.0409267	.1108960	.1305663	.3443377	.3839037
-1.52322	.06750	.01830	.01987	-.06753	1.59254	.0045567	.0198696	.0073745	.0321564	.1116825	.1337332	.3456770	.3892799
-1.67035	.05819	.01575	.01705	-.05872	1.73039	.0033860	.0170485	.0049816	.0250825	.1122668	.1364490	.3465860	.3934905
-1.81747	.05017	.01356	.01464	-.05100	1.86946	.0025170	.0146407	.0033328	.0193860	.1127010	.1387801	.3471976	.3967617
-1.96460	.04326	.01168	.01258	-.04426	2.00958	.0018716	.0125822	.0022029	.0148092	.1130238	.1407827	.3476048	.3992772
-2.11172	.03731	.01006	.01082	-.03838	2.15064	.0013921	.0108199	.0014337	.0111431	.1132639	.1425042	.3478723	.4011863
-2.25884	.03218	.00867	.00931	-.03326	2.29250	.0010357	.0093095	.0009143	.0082179	.1134425	.1439850	.3480450	.4026106
-2.40597	.02776	.00747	.00801	-.02880	2.43507	.0007707	.0080135	.0005670	.0058949	.1135754	.1452593	.3481540	.4036487
-2.55309	.02395	.00644	.00690	-.02493	2.57825	.0005736	.0069007	.0003376	.0040611	.1136743	.1463564	.3482205	.4043811
-2.70022	.02066	.00556	.00594	-.02157	2.72196	.0004270	.0059444	.0001885	.0026237	.1137479	.1473013	.3482592	.4048729
-2.84734	.01783	.00479	.00512	-.01866	2.86613	.0003179	.0051221	.0000935	.0015072	.1138027	.1481154	.3482800	.4051767
2.99447	.01539	.00413	.00441	-.01614	3.01070	.0002367	.0044146	.0000348	.0006495	.1138435	.1488170	.3482894	.4053354
3.14159	.01328	.00357	.00381	-.01395	3.15561	.0001763	.0038056	.0000000	.0000000	.1138739	.1494217	.3482920	.4053832

TION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30502	.38591	.24771	.29403	-.19621	.00009	.1489233	.2940315	.5132815	1.0134134	.0000000	.0000000	.0000000	.0000000
.16141	.33307	.20990	.24621	-.19907	.11518	.1109357	.2462063	.3664214	.8132209	.0186590	.0387915	.0631666	.1311605
.01780	.28750	.17854	.20698	-.19271	.23057	.0826583	.2069823	.2611504	.6539395	.0325600	.0713325	.1082291	.2365092
-.12580	.24823	.15233	.17469	-.18122	.34729	.0616201	.1746863	.1858332	.5268170	.0429198	.0987380	.1403245	.3212928
-.26941	.21439	.13030	.14796	-.16715	.46586	.0459646	.1479556	.1320187	.4249550	.0506449	.1219051	.1631477	.3896343
-.41302	.18522	.11168	.12571	-.15210	.58654	.0343083	.1257107	.0936126	.3430105	.0564088	.1415556	.1793490	.4447777
-.55663	.16007	.09588	.10710	-.13703	.70940	.0256234	.1071034	.0662356	.2768581	.0607122	.1582727	.1908269	.4892871
-.70024	.13838	.08243	.09147	-.12255	.83438	.0191478	.0914659	.0467465	.2233006	.0639270	.1725309	.1989395	.5252007
-.84385	.11965	.07095	.07827	-.10896	.96137	.0143160	.0782698	.0328945	.1798440	.0663298	.1847186	.2046581	.5541483
-.98746	.10348	.06112	.06709	-.09645	1.09025	.0107083	.0670936	.0230672	.1445287	.0681267	.1951564	.2086764	.5774397
1.13107	.08952	.05270	.05760	-.08506	1.22084	.0080130	.0575984	.0161104	.1158031	.0694710	.2041098	.2114895	.5961327
1.27468	.07745	.04547	.04951	-.07481	1.35298	.0059983	.0495096	.0111983	.0924302	.0704770	.2118007	.2134504	.6110848
1.41828	.06702	.03925	.04260	-.06563	1.48652	.0044915	.0426027	.0077402	.0734176	.0712302	.2184148	.2148102	.6229934
1.56189	.05800	.03390	.03669	-.05747	1.62130	.0033641	.0366933	.0053143	.0579644	.0717943	.2241086	.2157476	.6324272
1.70550	.05020	.02929	.03163	-.05024	1.75718	.0025203	.0316287	.0036194	.0454217	.0722168	.2290144	.2163891	.6398508
1.84911	.04346	.02532	.02728	-.04386	1.89405	.0018886	.0272817	.0024409	.0352611	.0725334	.2332444	.2168243	.6456442
1.99272	.03762	.02189	.02355	-.03824	2.03177	.0014154	.0235459	.0016261	.0270512	.0727707	.2368941	.2171163	.6501185
2.13633	.03257	.01893	.02033	-.03332	2.17025	.0010610	.0203318	.0010666	.0204388	.0729485	.2400447	.2173097	.6535285
2.27994	.02820	.01638	.01756	-.02900	2.30939	.0007954	.0175641	.0006854	.0151342	.0730818	.2427658	.2174354	.6560828
2.42355	.02442	.01417	.01518	-.02523	2.44911	.0005964	.0151787	.0004282	.0108990	.0731817	.2451169	.2175154	.6579521
2.56716	.02115	.01226	.01312	-.02193	2.58934	.0004472	.0131215	.0002569	.0075375	.0732566	.2471490	.2175646	.6592759
2.71077	.01831	.01061	.01135	-.01906	2.73001	.0003354	.0113463	.0001445	.0048883	.0733128	.2489059	.2175934	.6601681
2.85437	.01586	.00919	.00981	-.01655	2.87107	.0002515	.0098135	.0000722	.0028186	.0733550	.2504252	.2176090	.6607215
2.99798	.01373	.00795	.00849	-.01437	3.01246	.0001886	.0084896	.0000271	.0012192	.0733866	.2517395	.2176161	.6610115
3.14159	.01189	.00688	.00735	-.01247	3.15414	.0001415	.0073456	.0000000	.0000000	.0734103	.2528765	.2176181	.6610990

WATER SURFACE ELEVATION

=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



ELEV.VS. *K	TIME (K*6)^.5	DIST. *K	ANGLE DEGREES
-.27508	2.95512	3.14159	180.00
-.27471	2.89356	3.07614	176.25
-.27359	2.83199	3.01069	172.50
-.27172	2.77043	2.94524	168.75
-.26910	2.70886	2.87979	165.00
-.26573	2.64730	2.81434	161.25
-.26161	2.58573	2.74889	157.50
-.25674	2.52417	2.68344	153.75
-.25112	2.46260	2.61799	150.00
-.24477	2.40104	2.55254	146.25
-.23767	2.33947	2.48709	142.50
-.22981	2.27791	2.42164	138.75
-.22120	2.21634	2.35619	135.00
-.21181	2.15478	2.29074	131.25
-.20165	2.09321	2.22529	127.50
-.19072	2.03165	2.15984	123.75
-.17904	1.97008	2.09440	120.00
-.16662	1.90852	2.02895	116.25
-.15345	1.84695	1.96350	112.50
-.13954	1.78539	1.89805	108.75
-.12488	1.72382	1.83260	105.00
-.10946	1.66226	1.76715	101.25
-.09326	1.60069	1.70170	97.50
-.07627	1.53913	1.63625	93.75
-.05852	1.47756	1.57080	90.00
-.04002	1.41600	1.50535	86.25
-.02081	1.35443	1.43990	82.50
-.00091	1.29287	1.37445	78.75
.01966	1.23130	1.30900	75.00
.04090	1.16974	1.24355	71.25
.06279	1.10817	1.17810	67.50
.08535	1.04661	1.11265	63.75
.10853	.98504	1.04720	60.00
.13230	.92348	.98175	56.25
.15657	.86191	.91630	52.50
.18122	.80035	.85085	48.75
.20612	.73878	.78540	45.00
.23113	.67722	.71995	41.25
.25608	.61565	.65450	37.50
.28079	.55409	.58905	33.75
.30502	.49252	.52360	30.00
.32847	.43096	.45815	26.25
.35073	.36939	.39270	22.50
.37125	.30783	.32725	18.75
.38940	.24626	.26180	15.00
.40449	.18470	.19635	11.25
.41586	.12313	.13090	7.50
.42294	.06157	.06545	3.75
.42534	.00000	.00000	.00

34 -.27508

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

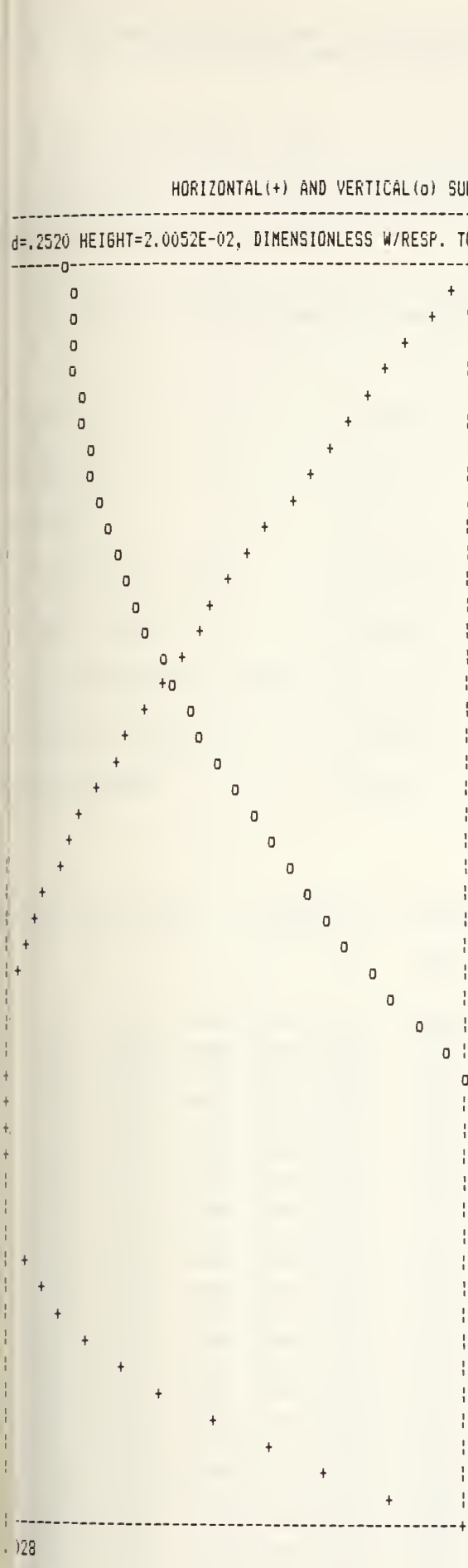
d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.23318	.00000	3.14159	180.00
-.23280	.01479	3.07614	176.25
-.23169	.02957	3.01069	172.50
-.22982	.04429	2.94524	168.75
-.22721	.05895	2.87979	165.00
-.22385	.07352	2.81434	161.25
-.21974	.08797	2.74889	157.50
-.21488	.10229	2.68344	153.75
-.20927	.11644	2.61799	150.00
-.20289	.13041	2.55254	146.25
-.19576	.14416	2.48709	142.50
-.18785	.15767	2.42164	138.75
-.17919	.17091	2.35619	135.00
-.16975	.18387	2.29074	131.25
-.15954	.19650	2.22529	127.50
-.14854	.20879	2.15984	123.75
-.13676	.22068	2.09440	120.00
-.12418	.23215	2.02895	116.25
-.11080	.24317	1.96350	112.50
-.09661	.25368	1.89805	108.75
-.08161	.26366	1.83260	105.00
-.06579	.27306	1.76715	101.25
-.04915	.28184	1.70170	97.50
-.03168	.28997	1.63625	93.75
-.01337	.29737	1.57080	90.00
.00578	.30400	1.50535	86.25
.02579	.30977	1.43990	82.50
.04665	.31463	1.37445	78.75
.06836	.31849	1.30900	75.00
.09092	.32127	1.24355	71.25
.11432	.32290	1.17810	67.50
.13856	.32328	1.11265	63.75
.16363	.32231	1.04720	60.00
.18950	.31986	.98175	56.25
.21612	.31581	.91630	52.50
.24344	.30998	.85085	48.75
.27137	.30220	.78540	45.00
.29977	.29228	.71995	41.25
.32848	.28003	.65450	37.50
.35729	.26524	.58905	33.75
.38591	.24771	.52360	30.00
.41395	.22722	.45815	26.25
.44089	.20360	.39270	22.50
.46607	.17671	.32725	18.75
.48866	.14653	.26180	15.00
.50769	.11322	.19635	11.25
.52220	.07719	.13090	7.50
.53132	.03914	.06545	3.75
.53443	.00000	.00000	.00

.43 -.23318

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax %1/G	Ay %1/G	DIST. %K	ANGLE DEGREES
.00000	.29308	3.14159	180.00
.01476	.29277	3.07614	176.25
.02950	.29185	3.01069	172.50
.04420	.29031	2.94524	168.75
.05885	.28816	2.87979	165.00
.07343	.28540	2.81434	161.25
.08791	.28202	2.74889	157.50
.10229	.27802	2.68344	153.75
.11654	.27340	2.61799	150.00
.13063	.26817	2.55254	146.25
.14455	.26231	2.48709	142.50
.15828	.25584	2.42164	138.75
.17181	.24876	2.35619	135.00
.18509	.24105	2.29074	131.25
.19813	.23274	2.22529	127.50
.21088	.22380	2.15984	123.75
.22332	.21424	2.09440	120.00
.23543	.20406	2.02895	116.25
.24717	.19325	1.96350	112.50
.25851	.18181	1.89805	108.75
.26942	.16975	1.83260	105.00
.27988	.15707	1.76715	101.25
.28983	.14377	1.70170	97.50
.29926	.12985	1.63625	93.75
.30810	.11532	1.57080	90.00
.31631	.10016	1.50535	86.25
.32382	.08438	1.43990	82.50
.33057	.06796	1.37445	78.75
.33647	.05093	1.30900	75.00
.34146	.03327	1.24355	71.25
.34544	.01500	1.17810	67.50
.34833	-.00386	1.11265	63.75
.34999	-.02331	1.04720	60.00
.35028	-.04334	.98175	56.25
.34903	-.06393	.91630	52.50
.34601	-.08505	.85085	48.75
.34096	-.10666	.78540	45.00
.33360	-.12870	.71995	41.25
.32359	-.15107	.65450	37.50
.31055	-.17364	.58905	33.75
.29403	-.19621	.52360	30.00
.27357	-.21850	.45815	26.25
.24867	-.24012	.39270	22.50
.21887	-.26056	.32725	18.75
.18388	-.27912	.26180	15.00
.14371	-.29498	.19635	11.25
.09886	-.30722	.13090	7.50
.05041	-.31498	.06545	3.75
.00000	-.31764	.00000	.00

.028 -.31764

TEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

PTH: DEEP , HEIGHT/DEPTH= .2520

VE HEIGHT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

URRENT CRITERION: EULER , MAGNITUDE= .00

LUTION OF ORDER 12 NON-DIMENSIONALIZED BY WAVE NUMBER, 1 HEIGHT STEP(S).

VE HEIGHT	.70042
VE PERIOD	5.9102
VE SPEED	1.0631
AN EULERIAN FLUID SPEED	-3.59109E-22
AN MASS TRANSPORT SPEED	4.19925E-20
AN FLUID SPEED RELATIVE TO WAVE	1.0631
LUME FLUX DUE TO WAVES	5.54412E-02
RNOULLI CONSTANT	.56509

UTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.42534	.53443	.00000	.00000	-.31765	.00000	.2856147	.0000000	1.0187697	.0000000	.0000000	.0000000	.0000000	.0000000
.27672	.45311	.00000	.00000	-.30359	.10232	.2053067	.0000000	.7018031	.0000000	.0364810	.0000000	.1278578	.0000000
.12810	.38544	.00000	.00000	-.28188	.20738	.1485614	.0000000	.4857502	.0000000	.0627773	.0000000	.2161063	.0000000
-.02052	.32869	.00000	.00000	-.25697	.31594	.1080385	.0000000	.3371958	.0000000	.0818456	.0000000	.2772604	.0000000
-.16914	.28084	.00000	.00000	-.23135	.42827	.0788724	.0000000	.2344442	.0000000	.0957351	.0000000	.3197397	.0000000
-.31777	.24032	.00000	.00000	-.20643	.54438	.0577548	.0000000	.1630896	.0000000	.1058881	.0000000	.3492809	.0000000
-.46639	.20590	.00000	.00000	-.18298	.66408	.0423938	.0000000	.1134120	.0000000	.1133302	.0000000	.3698280	.0000000
-.61501	.17658	.00000	.00000	-.16136	.78714	.0311793	.0000000	.0787769	.0000000	.1187975	.0000000	.3841098	.0000000
-.76363	.15155	.00000	.00000	-.14173	.91327	.0229680	.0000000	.0546169	.0000000	.1228213	.0000000	.3940225	.0000000
-.91226	.13016	.00000	.00000	-.12409	1.04216	.0169414	.0000000	.0377681	.0000000	.1257870	.0000000	.4008877	.0000000
-1.06088	.11185	.00000	.00000	-.10837	1.17353	.0125098	.0000000	.0260293	.0000000	.1279756	.0000000	.4056286	.0000000
-1.20950	.09616	.00000	.00000	-.09444	1.30710	.0092458	.0000000	.0178638	.0000000	.1295923	.0000000	.4088904	.0000000
-1.35812	.08270	.00000	.00000	-.08217	1.44262	.0068387	.0000000	.0121966	.0000000	.1307875	.0000000	.4111242	.0000000
-1.50675	.07114	.00000	.00000	-.07138	1.57985	.0050615	.0000000	.0082747	.0000000	.1316718	.0000000	.4126454	.0000000
-1.65537	.06122	.00000	.00000	-.06194	1.71858	.0037481	.0000000	.0055706	.0000000	.1323265	.0000000	.4136743	.0000000
-1.80399	.05270	.00000	.00000	-.05369	1.85862	.0027768	.0000000	.0037143	.0000000	.1328114	.0000000	.4143642	.0000000
-1.95261	.04537	.00000	.00000	-.04650	1.99981	.0020581	.0000000	.0024470	.0000000	.1331706	.0000000	.4148221	.0000000
-2.10124	.03906	.00000	.00000	-.04025	2.14200	.0015258	.0000000	.0015874	.0000000	.1334370	.0000000	.4151219	.0000000
-2.24986	.03364	.00000	.00000	-.03481	2.28505	.0011316	.0000000	.0010091	.0000000	.1336344	.0000000	.4153148	.0000000
-2.39848	.02897	.00000	.00000	-.03010	2.42886	.0008394	.0000000	.0006238	.0000000	.1337809	.0000000	.4154362	.0000000
-2.54710	.02496	.00000	.00000	-.02601	2.57332	.0006228	.0000000	.0003702	.0000000	.1338896	.0000000	.4155100	.0000000
-2.69573	.02150	.00000	.00000	-.02247	2.71835	.0004621	.0000000	.0002060	.0000000	.1339702	.0000000	.4155529	.0000000
-2.84435	.01852	.00000	.00000	-.01940	2.86386	.0003430	.0000000	.0001020	.0000000	.1340300	.0000000	.4155758	.0000000
-2.99297	.01596	.00000	.00000	-.01675	3.00981	.0002546	.0000000	.0000378	.0000000	.1340744	.0000000	.4155861	.0000000
-3.14159	.01375	.00000	.00000	-.01446	3.15611	.0001890	.0000000	.0000000	.0000000	.1341074	.0000000	.4155890	.0000000

LUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.38935	.48863	.14652	.18386	-.27912	.00000	.2387574	.1838603	.8430384	.6491999	.0000000	.0000000	.0000000	.0000000
.24223	.41671	.12230	.14977	-.27147	.10647	.1736444	.1497690	.5875810	.5067913	.0303368	.0245422	.1052382	.0850362
.09510	.35612	.10281	.12325	-.25506	.21479	.1268202	.1232528	.4104786	.3989317	.0524394	.0446260	.1786567	.1516623
-.05202	.30485	.08687	.10228	-.23453	.32587	.0929362	.1022810	.2871333	.3160045	.0686049	.0612166	.2299739	.2042539
-.19914	.26133	.07370	.08545	-.21255	.44010	.0682922	.0854538	.2009465	.2514436	.0804651	.0750266	.2658777	.2459961
-.34626	.22427	.06272	.07179	-.19066	.55757	.0502953	.0717881	.1405920	.2006714	.0891885	.0865935	.2910017	.2792543
-.49339	.19264	.05351	.06058	-.16974	.67819	.0371092	.0605782	.0982727	.1604235	.0956181	.0963305	.3085729	.3058169
-.64051	.16559	.04574	.05131	-.15025	.80180	.0274217	.0513061	.0685839	.1283209	.1003651	.1045609	.3208471	.3270573
-.78763	.14244	.03916	.04358	-.13241	.92815	.0202887	.0435843	.0477588	.1025958	.1038747	.1115412	.3294054	.3440438
-.93475	.12258	.03357	.03712	-.11627	1.05700	.0150270	.0371170	.0331622	.0819113	.1064726	.1174776	.3353581	.3576164
-1.08188	.10555	.02881	.03167	-.10182	1.18810	.0111398	.0316749	.0229447	.0652413	.1083975	.1225381	.3394854	.3684411
-1.22900	.09091	.02475	.02708	-.08895	1.32121	.0082642	.0270774	.0158061	.0517881	.1098249	.1268600	.3423359	.3770500
-1.37612	.07833	.02127	.02318	-.07757	1.45610	.0061348	.0231808	.0108309	.0409251	.1108841	.1305570	.3442954	.3838701
-1.52324	.06750	.01830	.01987	-.06753	1.59256	.0045565	.0198692	.0073741	.0321552	.1116705	.1337238	.3456346	.3892460
-1.67037	.05819	.01575	.01705	-.05872	1.73041	.0033858	.0170481	.0049813	.0250817	.1122548	.1364395	.3465434	.3934564
-1.81749	.05017	.01356	.01464	-.05100	1.86947	.0025169	.0146404	.0033326	.0193854	.1126890	.1387706	.3471550	.3967274
-1.96461	.04326	.01168	.01258	-.04426	2.00960	.0018716	.0125820	.0022028	.0148087	.1130118	.1407731	.3475622	.3992428
-2.11173	.03731	.01006	.01082	-.03838	2.15065	.0013921	.0108198	.0014337	.0111428	.1132519	.1424945	.3478297	.4011518
-2.25886	.03218	.00867	.00931	-.03326	2.29252	.0010357	.0093094	.0009143	.0082177	.1134305	.1439753	.3480024	.4025760
-2.40598	.02776	.00747	.00801	-.02880	2.43508	.0007707	.0080135	.0005669	.0058948	.1135634	.1452496	.3481114	.4036141
-2.55310	.02395	.00644	.00690	-.02493	2.57826	.0005736	.0069006	.0003376	.0040610	.1136623	.1463467	.3481779	.4043465
-2.70023	.02066	.00556	.00594	-.02157	2.72196	.0004270	.0059444	.0001885	.0026236	.1137359	.1472916	.3482166	.4048382
-2.84735	.01783	.00479	.00512	-.01866	2.86613	.0003179	.0051221	.0000935	.0015071	.1137907	.1481056	.3482374	.4051421
-2.99447	.01539	.00413	.00441	-.01614	3.01070	.0002367	.0044146	.0000348	.0006495	.1138315	.1488071	.3482468	.4053007
-3.14159	.01328	.00357	.00381	-.01395	3.15561	.0001763	.0038056	.0000000	.0000000	.1138618	.1494118	.3482494	.4053485

UTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30514	.38595	.24774	.29408	-.19620	.00000	.1489593	.2940752	.5134228	1.0135985	.0000000	.0000000	.0000000	.0000000
.16153	.33311	.20992	.24624	-.19907	.11509	.1109612	.2462400	.3665179	.8133597	.0186641	.0387984	.0631858	.1311882
.01791	.28754	.17856	.20701	-.19272	.23049	.0826764	.2070087	.2612164	.6540448	.0325686	.0713448	.1082615	.2365580
-.12570	.24826	.15235	.17471	-.18123	.34721	.0616329	.1747070	.1858782	.5268973	.0429310	.0987546	.1403660	.3213578
-.26932	.21441	.13031	.14797	-.16716	.46578	.0459737	.1479719	.1320493	.4250163	.0506579	.1219252	.1631954	.3897118
-.41293	.18524	.11169	.12572	-.15211	.58647	.0343147	.1257237	.0936333	.3430575	.0564232	.1415784	.1794009	.4448648
-.55654	.16009	.09589	.10711	-.13704	.70932	.0256280	.1071137	.0662495	.2768941	.0607275	.1582977	.1908816	.4893816
-.70016	.13839	.08244	.09147	-.12255	.83430	.0191510	.0914741	.0467559	.2233282	.0639429	.1725577	.1989962	.5253010
-.84377	.11966	.07095	.07828	-.10897	.96130	.0143183	.0782764	.0329008	.1798651	.0663462	.1847470	.2047161	.5542531
-.98739	.10349	.06113	.06710	-.09645	1.09018	.0107099	.0670988	.0230714	.1445448	.0681434	.1951859	.2087353	.5775479
-1.13100	.08952	.05270	.05760	-.08507	1.22077	.0080141	.0576026	.0161132	.1158153	.0694880	.2041403	.2115490	.5962436
-1.27461	.07745	.04547	.04951	-.07481	1.35292	.0059990	.0495128	.0112001	.0924395	.0704942	.2118320	.2135103	.6111977
-1.41823	.06702	.03926	.04261	-.06563	1.48646	.0044920	.0426053	.0077414	.0734245	.0712475	.2184467	.2148704	.6231079
-1.56184	.05800	.03390	.03670	-.05747	1.62125	.0033645	.0366954	.0053151	.0579696	.0718117	.2241410	.2158080	.6325429
-1.70545	.05021	.02930	.03163	-.05024	1.75714	.0025206	.0316303	.0036199	.0454255	.0722343	.2290473	.2164496	.6399674
-1.84907	.04346	.02532	.02728	-.04386	1.89401	.0018887	.0272829	.0024412	.0352639	.0725509	.2332776	.2168848	.6457614
-1.99268	.03762	.02189	.02355	-.03824	2.03173	.0014155	.0235468	.0016263	.0270532	.0727882	.2369276	.2171769	.6502362
-2.13630	.03257	.01893	.02033	-.03332	2.17022	.0010611	.0203325	.0010667	.0204402	.0729660	.2400784	.2173702	.6536466
-2.27991	.02820	.01638	.01756	-.02900	2.30936	.0007954	.0175646	.0006854	.0151351	.0730993	.2427997	.2174961	.6562012
-2.42352	.02442	.01417	.01518	-.02523	2.44909	.0005964	.0151791	.0004283	.0108996	.0731993	.2451509	.2175760	.6580706
-2.56714	.02115	.01226	.01312	-.02193	2.58932	.0004472	.0131218	.0002569	.0075379	.0732742	.2471831	.2176252	.6593946
-2.71075	.01831	.01061	.01135	-.01906	2.73000	.0003354	.0113464	.0001445	.0048885	.0733304	.2489401	.2176541	.6602869
-2.85437	.01586	.00919	.00981	-.01655	2.87106	.0002515	.0098136	.0000722	.0028187	.0733725	.2504595	.2176696	.6608403
-2.99798	.01373	.00795	.00849	-.01437	3.01245	.0001886	.0084896	.0000271	.0012192	.0734041	.2517738	.2176767	.6611303
-3.14159	.01189	.00688	.00735	-.01247	3.15414	.0001415	.0073456	.0000000	.0000000	.0734278	.2529109	.2176787	.6612178

WATER SURFACE ELEVATION

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

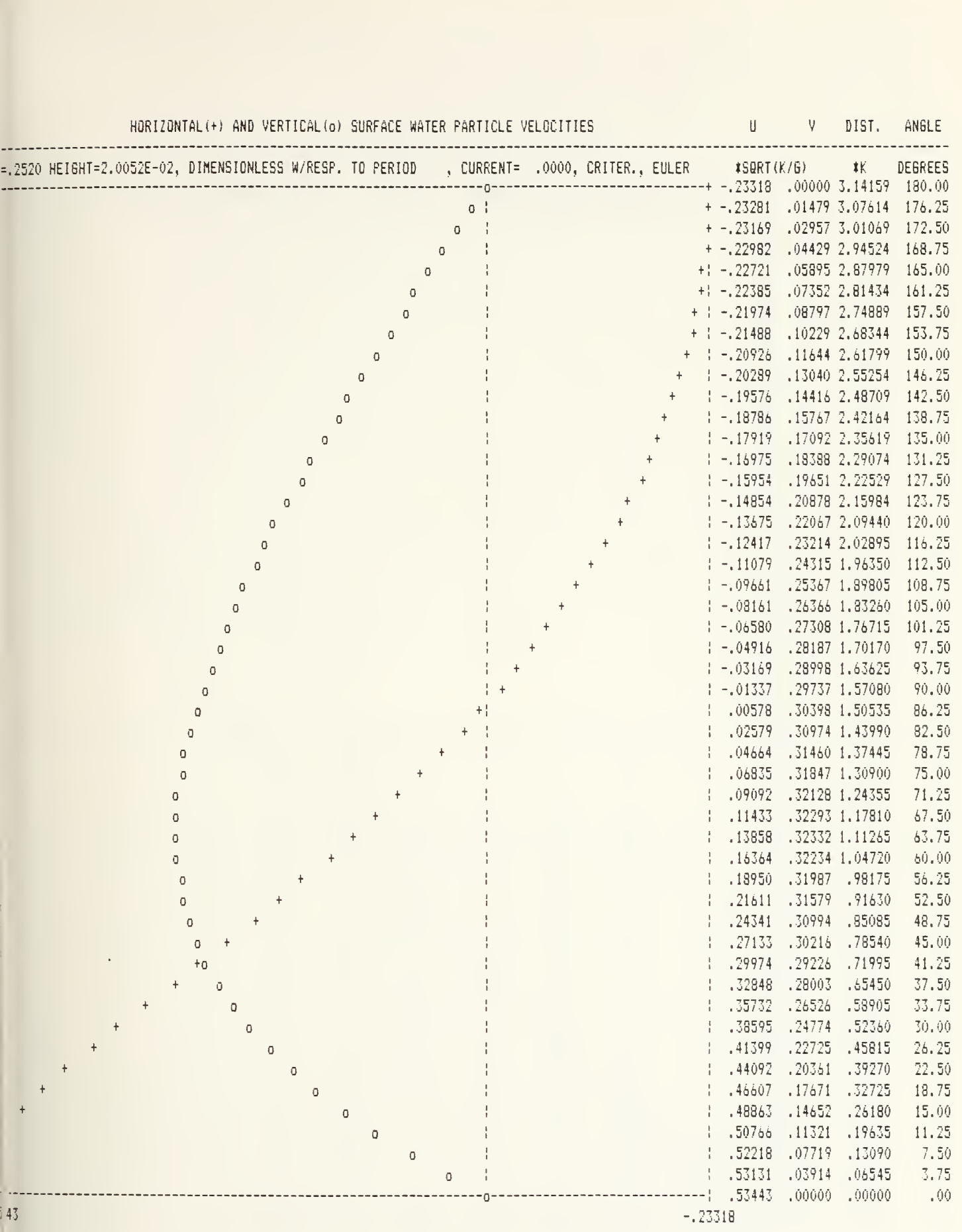
ELEV.VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.27508	2.95512	3.14159	180.00
-.27470	2.89356	3.07614	176.25
-.27358	2.83199	3.01069	172.50
-.27172	2.77043	2.94524	168.75
-.26910	2.70886	2.87979	165.00
-.26573	2.64730	2.81434	161.25
-.26162	2.58573	2.74889	157.50
-.25675	2.52417	2.68344	153.75
-.25114	2.46260	2.61799	150.00
-.24478	2.40104	2.55254	146.25
-.23767	2.33947	2.48709	142.50
-.22979	2.27791	2.42164	138.75
-.22116	2.21634	2.35619	135.00
-.21177	2.15478	2.29074	131.25
-.20163	2.09321	2.22529	127.50
-.19073	2.03165	2.15984	123.75
-.17908	1.97008	2.09440	120.00
-.16667	1.90852	2.02895	116.25
-.15350	1.84695	1.96350	112.50
-.13956	1.78539	1.89805	108.75
-.12485	1.72382	1.83260	105.00
-.10939	1.66226	1.76715	101.25
-.09317	1.60069	1.70170	97.50
-.07622	1.53913	1.63625	93.75
-.05852	1.47756	1.57080	90.00
-.04009	1.41600	1.50535	86.25
-.02091	1.35443	1.43990	82.50
-.00101	1.29287	1.37445	78.75
.01962	1.23130	1.30900	75.00
.04093	1.16974	1.24355	71.25
.06290	1.10817	1.17810	67.50
.08547	1.04661	1.11265	63.75
.10863	.98504	1.04720	60.00
.13232	.92348	.98175	56.25
.15650	.86191	.91630	52.50
.18109	.80035	.85085	48.75
.20599	.73878	.78540	45.00
.23105	.67722	.71995	41.25
.25608	.61565	.65450	37.50
.28087	.55409	.58905	33.75
.30514	.49252	.52360	30.00
.32858	.43096	.45815	26.25
.35078	.36939	.39270	22.50
.37124	.30783	.32725	18.75
.38935	.24626	.26180	15.00
.40444	.18470	.19635	11.25
.41583	.12313	.13090	7.50
.42293	.06157	.06545	3.75
.42534	.00000	.00000	.00

.34

-.27508

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

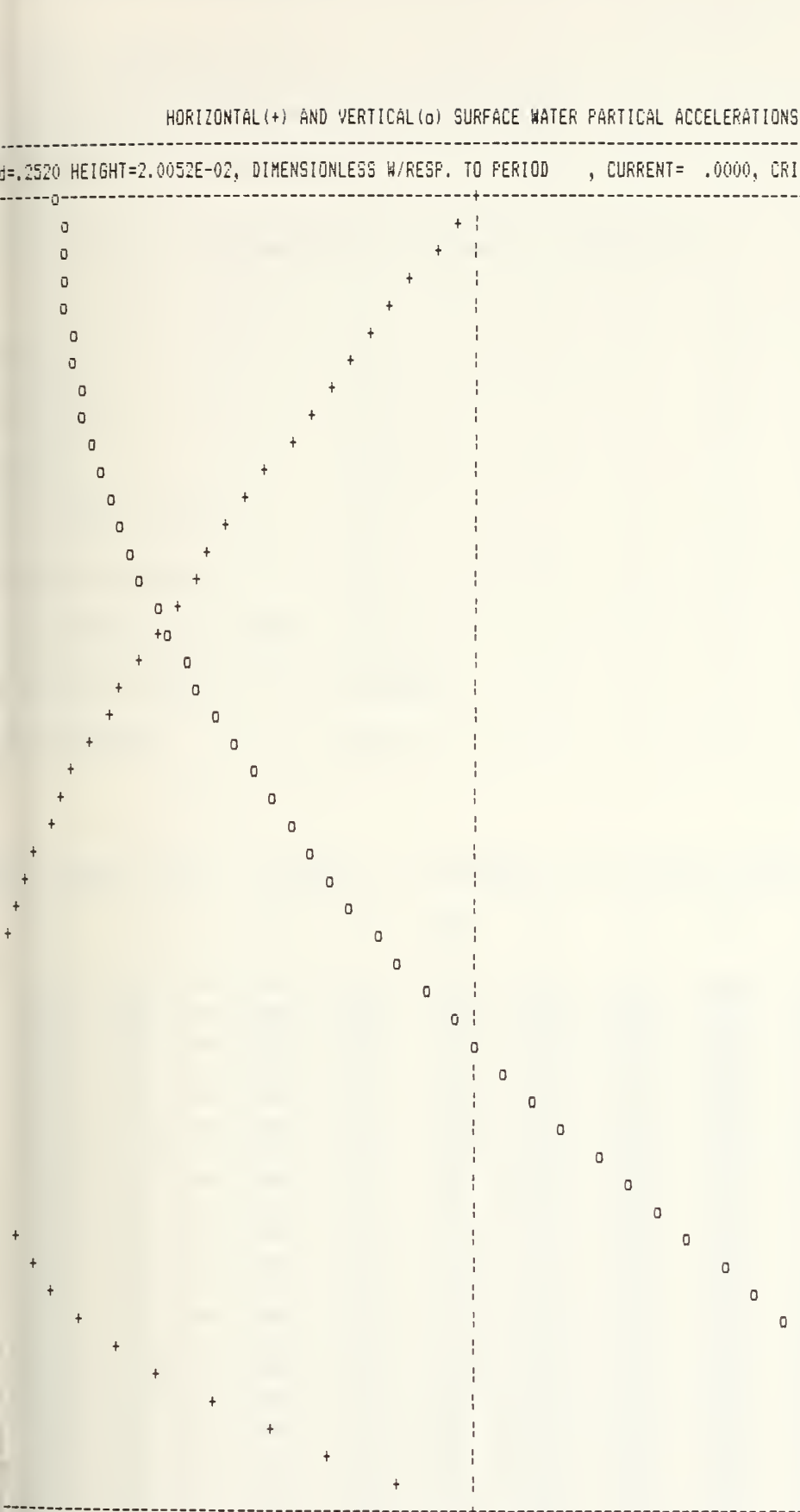


U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.23318	.00000	3.14159	180.00
-.23281	.01479	3.07614	176.25
-.23169	.02957	3.01069	172.50
-.22982	.04429	2.94524	168.75
-.22721	.05895	2.87979	165.00
-.22385	.07352	2.81434	161.25
-.21974	.08797	2.74889	157.50
-.21488	.10229	2.68344	153.75
-.20926	.11644	2.61799	150.00
-.20289	.13040	2.55254	146.25
-.19576	.14416	2.48709	142.50
-.18786	.15767	2.42164	138.75
-.17919	.17092	2.35619	135.00
-.16975	.18388	2.29074	131.25
-.15954	.19651	2.22529	127.50
-.14854	.20878	2.15984	123.75
-.13675	.22067	2.09440	120.00
-.12417	.23214	2.02895	116.25
-.11079	.24315	1.96350	112.50
-.09661	.25367	1.89805	108.75
-.08161	.26366	1.83260	105.00
-.06580	.27308	1.76715	101.25
-.04916	.28187	1.70170	97.50
-.03169	.28998	1.63625	93.75
-.01337	.29737	1.57080	90.00
.00578	.30398	1.50535	86.25
.02579	.30974	1.43990	82.50
.04664	.31460	1.37445	78.75
.06835	.31847	1.30900	75.00
.09092	.32128	1.24355	71.25
.11433	.32293	1.17810	67.50
.13858	.32332	1.11265	63.75
.16364	.32234	1.04720	60.00
.18950	.31987	.98175	56.25
.21611	.31579	.91630	52.50
.24341	.30994	.85085	48.75
.27133	.30216	.78540	45.00
.29974	.29226	.71995	41.25
.32848	.28003	.65450	37.50
.35732	.26526	.58905	33.75
.38595	.24774	.52360	30.00
.41399	.22725	.45815	26.25
.44092	.20361	.39270	22.50
.46607	.17671	.32725	18.75
.48863	.14652	.26180	15.00
.50766	.11321	.19635	11.25
.52218	.07719	.13090	7.50
.53131	.03914	.06545	3.75
.53443	.00000	.00000	.00

43 -.23318

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax	Ay	DIST.	ANGLE
%1/G	%1/G	%K	DEGREES
.00000	.29308	3.14159	180.00
.01476	.29277	3.07614	176.25
.02950	.29185	3.01069	172.50
.04420	.29031	2.94524	168.75
.05885	.28816	2.87979	165.00
.07343	.28540	2.81434	161.25
.08791	.28201	2.74889	157.50
.10229	.27801	2.68344	153.75
.11653	.27340	2.61799	150.00
.13063	.26816	2.55254	146.25
.14455	.26231	2.48709	142.50
.15829	.25585	2.42164	138.75
.17181	.24877	2.35619	135.00
.18510	.24106	2.29074	131.25
.19813	.23274	2.22529	127.50
.21088	.22380	2.15984	123.75
.22332	.21423	2.09440	120.00
.23542	.20404	2.02895	116.25
.24716	.19324	1.96350	112.50
.25851	.18181	1.89805	108.75
.26943	.16976	1.83260	105.00
.27990	.15709	1.76715	101.25
.28986	.14379	1.70170	97.50
.29927	.12987	1.63625	93.75
.30810	.11532	1.57080	90.00
.31629	.10015	1.50535	86.25
.32379	.08435	1.43990	82.50
.33054	.06794	1.37445	78.75
.33646	.05092	1.30900	75.00
.34147	.03328	1.24355	71.25
.34548	.01502	1.17810	67.50
.34837	-.00384	1.11265	63.75
.35002	-.02330	1.04720	60.00
.35029	-.04334	.98175	56.25
.34900	-.06394	.91630	52.50
.34596	-.08506	.85085	48.75
.34091	-.10667	.78540	45.00
.33358	-.12870	.71995	41.25
.32360	-.15107	.65450	37.50
.31058	-.17364	.58905	33.75
.29408	-.19620	.52360	30.00
.27361	-.21849	.45815	26.25
.24868	-.24012	.39270	22.50
.21886	-.26056	.32725	18.75
.18386	-.27912	.26180	15.00
.14369	-.29497	.19635	11.25
.09886	-.30721	.13090	7.50
.05041	-.31498	.06545	3.75
.00000	-.31765	.00000	.00

029 -.31765

TEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

PTH: DEEP , HEIGHT/DEPTH= .2520

VE HEIGHT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

URRENT CRITERION: EULER , MAGNITUDE= .14

LUTION OF ORDER 12 NON-DIMENSIONALIZED BY WAVE NUMBER, 1 HEIGHT STEP(S).

AVE HEIGHT	.59341
AVE PERIOD	5.4401
AVE SPEED	1.1550
EAN EULERIAN FLUID SPEED	.10999
EAN MASS TRANSPORT SPEED	.10999
EAN FLUID SPEED RELATIVE TO WAVE	1.0450
OLUME FLUX DUE TO WAVES	4.14150E-02
ERNOULLI CONSTANT	.54600

LUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.34707	.52422	.00000	.00000	-.27578	.00000	.2748031	.0000000	.9586956	.0000000	.0000000	.0000000	.0000000	.0000000
.20171	.46556	.00000	.00000	-.25635	.10664	.2167466	.0000000	.7246493	.0000000	.0357261	.0000000	.1223463	.0000000
.05635	.41560	.00000	.00000	-.23454	.21631	.1727208	.0000000	.5523511	.0000000	.0640328	.0000000	.2151593	.0000000
-.08901	.37292	.00000	.00000	-.21215	.32920	.1390694	.0000000	.4245204	.0000000	.0866938	.0000000	.2861588	.0000000
-.23437	.33639	.00000	.00000	-.19027	.44533	.1131570	.0000000	.3289721	.0000000	.1050257	.0000000	.3409230	.0000000
-.37973	.30506	.00000	.00000	-.16953	.56456	.0930631	.0000000	.2570270	.0000000	.1200139	.0000000	.3835137	.0000000
-.52510	.27816	.00000	.00000	-.15027	.68669	.0773751	.0000000	.2024518	.0000000	.1324014	.0000000	.4169089	.0000000
-.67046	.25504	.00000	.00000	-.13265	.81151	.0650457	.0000000	.1607369	.0000000	.1427527	.0000000	.4433056	.0000000
-.81582	.23514	.00000	.00000	-.11671	.93877	.0552930	.0000000	.1285991	.0000000	.1514989	.0000000	.4643347	.0000000
-.96118	.21801	.00000	.00000	-.10240	1.06822	.0475293	.0000000	.1036337	.0000000	.1589721	.0000000	.4812135	.0000000
-1.10654	.20325	.00000	.00000	-.08965	1.19965	.0413107	.0000000	.0840695	.0000000	.1654291	.0000000	.4948558	.0000000
-1.25190	.19052	.00000	.00000	-.07834	1.33281	.0362995	.0000000	.0685948	.0000000	.1710698	.0000000	.5059515	.0000000
-1.39726	.17955	.00000	.00000	-.06835	1.46753	.0322375	.0000000	.0562329	.0000000	.1760511	.0000000	.5150241	.0000000
-1.54262	.17008	.00000	.00000	-.05956	1.60361	.0289265	.0000000	.0462526	.0000000	.1804965	.0000000	.5224728	.0000000
-1.68798	.16190	.00000	.00000	-.05183	1.74088	.0262130	.0000000	.0381035	.0000000	.1845041	.0000000	.5286038	.0000000
-1.83334	.15485	.00000	.00000	-.04507	1.87921	.0239779	.0000000	.0313691	.0000000	.1881520	.0000000	.5336531	.0000000
-1.97870	.14875	.00000	.00000	-.03916	2.01846	.0221280	.0000000	.0257324	.0000000	.1915030	.0000000	.5378033	.0000000
-2.12407	.14349	.00000	.00000	-.03400	2.15851	.0205900	.0000000	.0209509	.0000000	.1946077	.0000000	.5411962	.0000000
-2.26943	.13895	.00000	.00000	-.02951	2.29927	.0193061	.0000000	.0168381	.0000000	.1975074	.0000000	.5439427	.0000000
-2.41479	.13502	.00000	.00000	-.02559	2.44063	.0182301	.0000000	.0132497	.0000000	.2002356	.0000000	.5461295	.0000000
-2.56015	.13163	.00000	.00000	-.02219	2.58252	.0173252	.0000000	.0100736	.0000000	.2028197	.0000000	.5478247	.0000000
-2.70551	.12869	.00000	.00000	-.01923	2.72488	.0165618	.0000000	.0072223	.0000000	.2052827	.0000000	.5490818	.0000000
-2.85087	.12616	.00000	.00000	-.01666	2.86763	.0159160	.0000000	.0046271	.0000000	.2076432	.0000000	.5499430	.0000000
-2.99623	.12397	.00000	.00000	-.01443	3.01074	.0153681	.0000000	.0022339	.0000000	.2099169	.0000000	.5504417	.0000000
-3.14159	.12207	.00000	.00000	-.01250	3.15415	.0149023	.0000000	.0000000	.0000000	.2121170	.0000000	.5506040	.0000000

UTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

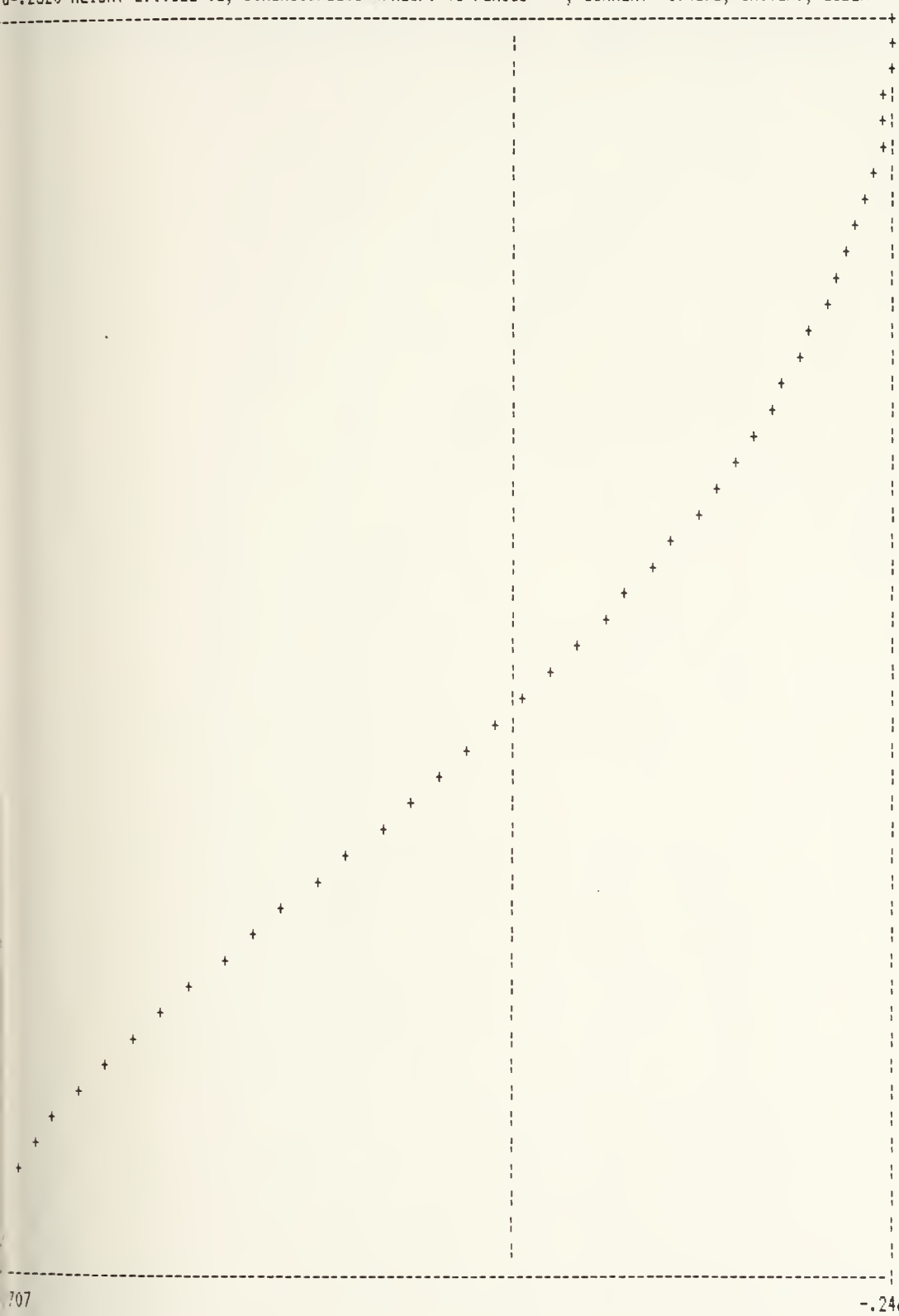
KY	U	V	AX	AY	PRESS	- FD	FI	MD	MI	FDS	FIS	MDS	MIS
.32429	.49818	.10975	.12483	-.25291	.00000	.2481825	.1248346	.8601704	.4326615	.0000000	.0000000	.0000000	.0000000
.17987	.44400	.09358	.10517	-.23677	.10900	.1971389	.1051725	.6547902	.3493270	.0321548	.0166078	.1093889	.0564641
.03546	.39766	.08001	.08899	-.21782	.22057	.1581336	.0889936	.5023990	.2827377	.0578075	.0306278	.1929447	.1021028
-.10895	.35794	.06856	.07558	-.19788	.33496	.1281207	.0755756	.3885443	.2291939	.0784767	.0425106	.2572760	.1390673
-.25336	.32384	.05884	.06437	-.17810	.45223	.1048728	.0643728	.3028970	.1859236	.0953002	.0526157	.3072021	.1690412
-.39777	.29453	.05057	.05497	-.15916	.57231	.0867479	.0549669	.2380206	.1508194	.1091363	.0612327	.3462595	.1933560
-.54218	.26931	.04351	.04703	-.14144	.69503	.0725266	.0470326	.1885264	.1222569	.1206369	.0685977	.3770586	.2130737
-.68660	.24758	.03747	.04031	-.12514	.82021	.0612980	.0403131	.1504865	.0989686	.1302998	.0749046	.4015373	.2290474
-.83101	.22886	.03230	.03460	-.11033	.94764	.0523772	.0346038	.1210221	.0799550	.1385078	.0803140	.4211418	.2419667
-.97542	.21271	.02785	.02974	-.09699	1.07710	.0452466	.0297393	.0980120	.0644205	.1455568	.0849599	.4369573	.2523915
-1.11983	.19878	.02403	.02558	-.08505	1.20838	.0395127	.0255850	.0798854	.0517268	.1516769	.0889547	.4498025	.2607780
-1.26424	.18675	.02075	.02203	-.07444	1.34129	.0348751	.0220302	.0654729	.0413584	.1570482	.0923928	.4602983	.2674993
-1.40865	.17636	.01792	.01898	-.06505	1.47565	.0311030	.0189833	.0538995	.0328970	.1618122	.0953542	.4689176	.2728610
-1.55307	.16739	.01548	.01637	-.05676	1.61127	.0280180	.0163682	.0445074	.0260013	.1660810	.0979068	.4760232	.2771138
-1.69748	.15963	.01338	.01412	-.04947	1.74803	.0254820	.0141208	.0367990	.0203921	.1699441	.1001082	.4818940	.2804636
-1.84189	.15293	.01156	.01219	-.04307	1.88577	.0233871	.0121877	.0303963	.0158404	.1734727	.1020079	.4867459	.2830798
-1.98630	.14713	.00999	.01052	-.03747	2.02437	.0216484	.0105233	.0250102	.0121575	.1767245	.1036477	.4907465	.2851014
-2.13071	.14212	.00864	.00909	-.03257	2.16374	.0201992	.0090892	.0204190	.0091881	.1797462	.1050639	.4940268	.2866427
-2.27512	.13779	.00747	.00785	-.02830	2.30376	.0189865	.0078529	.0164513	.0068043	.1825756	.1062872	.4966890	.2877975
-2.41953	.13404	.00646	.00679	-.02457	2.44436	.0179680	.0067864	.0129739	.0049001	.1852439	.1073442	.4988137	.2886426
-2.56395	.13080	.00559	.00587	-.02133	2.58546	.0171097	.0058659	.0098833	.0033884	.1877767	.1082578	.5004641	.2892411
-2.70836	.12800	.00484	.00507	-.01850	2.72700	.0163841	.0050713	.0070982	.0021971	.1901952	.1090475	.5016903	.2896444
-2.85277	.12558	.00418	.00438	-.01605	2.86892	.0157691	.0043850	.0045545	.0012665	.1925168	.1097303	.5025317	.2898945
-2.99718	.12348	.00362	.00379	-.01392	3.01118	.0152466	.0037921	.0022018	.0005476	.1947564	.1103208	.5030195	.2900254
-3.14159	.12166	.00313	.00328	-.01206	3.15371	.0148016	.0032797	.0000000	.0000000	.1969260	.1108314	.5031785	.2900650

UTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.26531	.43184	.19611	.21823	-.19531	.00000	.1864986	.2182253	.6353483	.7434720	.0000000	.0000000	.0000000	.0000000
.12335	.38855	.16828	.18585	-.18673	.11478	.1509722	.1858460	.4929163	.6067775	.0239520	.0286798	.0800810	.0958368
-.01860	.35115	.14466	.15866	-.17456	.23106	.1233029	.1586591	.3850739	.4954913	.0434192	.0531318	.1423982	.1740727
-.16055	.31881	.12453	.13575	-.16062	.34921	.1016426	.1357464	.3030006	.4046652	.0593852	.0740278	.1912357	.2379632
-.30251	.29086	.10734	.11637	-.14609	.46940	.0846000	.1163663	.2401865	.3303738	.0726042	.0919221	.2297896	.2901341
-.44446	.26668	.09262	.09992	-.13171	.59164	.0711196	.0999200	.1918189	.2694973	.0836567	.1072735	.2604520	.3327112
-.58642	.24576	.07998	.08592	-.11795	.71588	.0603993	.0859221	.1543309	.2195462	.0929915	.1204640	.2850208	.3674221
-.72837	.22766	.06911	.07398	-.10506	.84202	.0518273	.0739772	.1250707	.1785234	.1009571	.1318132	.3048519	.3956759
-.87033	.21198	.05976	.06376	-.09317	.96992	.0449353	.0637610	.1020600	.1448184	.1078250	.1415895	.3209730	.4186258
-1.01228	.19840	.05170	.05501	-.08235	1.09942	.0393638	.0550062	.0838179	.1171255	.1138083	.1500192	.3341660	.4372178
-1.15423	.18664	.04474	.04749	-.07257	1.23040	.0348356	.0474910	.0692309	.0943817	.1190748	.1572942	.3450290	.4522300
-1.29619	.17645	.03873	.04103	-.06380	1.36268	.0311360	.0410304	.0574586	.0757176	.1237572	.1635772	.3540211	.4643032
-1.43814	.16762	.03355	.03547	-.05599	1.49614	.0280980	.0354693	.0478635	.0604202	.1279615	.1690069	.3614965	.4739658
-1.58010	.15997	.02906	.03068	-.04904	1.63065	.0255910	.0306774	.0399602	.0479026	.1317722	.1737018	.3677300	.4816543
-1.72205	.15334	.02518	.02654	-.04290	1.76609	.0235126	.0265443	.0333771	.0376808	.1352574	.1777632	.3729353	.4877287
-1.86400	.14759	.02182	.02298	-.03749	1.90235	.0217820	.0229767	.0278284	.0293547	.1384723	.1812781	.3772794	.4924867
-2.00596	.14260	.01891	.01989	-.03273	2.03932	.0203350	.0198949	.0230931	.0225934	.1414616	.1843210	.3808937	.4961739
-2.14791	.13828	.01639	.01723	-.02854	2.17694	.0191206	.0172313	.0189997	.0171224	.1442621	.1869561	.3838813	.4989928
2.28987	.13453	.01421	.01493	-.02488	2.31511	.0180977	.0149279	.0154142	.0127144	.1469037	.1892387	.3863239	.5011105
-2.43182	.13128	.01232	.01294	-.02167	2.45376	.0172333	.0129350	.0122317	.0091809	.1494114	.1912163	.3882862	.5026646
-2.57378	.12846	.01069	.01121	-.01886	2.59284	.0165008	.0112102	.0093694	.0063654	.1518058	.1929301	.3898194	.5037680
-2.71573	.12601	.00927	.00972	-.01641	2.73230	.0158784	.0097169	.0067620	.0041381	.1541039	.1944154	.3909643	.5045135
-2.85768	.12389	.00804	.00842	-.01428	2.87208	.0153481	.0084237	.0043575	.0023916	.1563203	.1957030	.3917535	.5049770
-2.99964	.12205	.00697	.00730	-.01241	3.01214	.0148955	.0073034	.0021145	.0010367	.1584669	.1968192	.3922129	.5052203
-3.14159	.12045	.00605	.00633	-.01079	3.15245	.0145083	.0063327	.0000000	.0000000	.1605539	.1977871	.3923630	.5052939

WATER SURFACE ELEVATION

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= 1.4278, CRITER., EULER



ELEV.VS.	TIME	DIST.	ANGLE
‡K	(K‡G)^.5	‡K	DEGREES
-.24634	2.72003	3.14159	180.00
-.24599	2.66337	3.07614	176.25
-.24492	2.60670	3.01069	172.50
-.24313	2.55003	2.94524	168.75
-.24063	2.49336	2.87979	165.00
-.23742	2.43670	2.81434	161.25
-.23350	2.38003	2.74889	157.50
-.22886	2.32336	2.68344	153.75
-.22351	2.26670	2.61799	150.00
-.21745	2.21003	2.55254	146.25
-.21068	2.15336	2.48709	142.50
-.20321	2.09669	2.42164	138.75
-.19502	2.04003	2.35619	135.00
-.18613	1.98336	2.29074	131.25
-.17654	1.92669	2.22529	127.50
-.16624	1.87002	2.15984	123.75
-.15526	1.81336	2.09440	120.00
-.14358	1.75669	2.02895	116.25
-.13121	1.70002	1.96350	112.50
-.11816	1.64335	1.89805	108.75
-.10445	1.58669	1.83260	105.00
-.09007	1.53002	1.76715	101.25
-.07504	1.47335	1.70170	97.50
-.05937	1.41668	1.63625	93.75
-.04309	1.36002	1.57080	90.00
-.02620	1.30335	1.50535	86.25
-.00874	1.24668	1.43990	82.50
.00928	1.19002	1.37445	78.75
.02781	1.13335	1.30900	75.00
.04682	1.07668	1.24355	71.25
.06626	1.02001	1.17810	67.50
.08607	.96335	1.11265	63.75
.10620	.90668	1.04720	60.00
.12655	.85001	.98175	56.25
.14705	.79334	.91630	52.50
.16757	.73668	.85085	48.75
.18800	.68001	.78540	45.00
.20818	.62334	.71995	41.25
.22793	.56667	.65450	37.50
.24705	.51001	.58905	33.75
.26531	.45334	.52360	30.00
.28245	.39667	.45815	26.25
.29820	.34000	.39270	22.50
.31224	.28334	.32725	18.75
.32429	.22667	.26180	15.00
.33402	.17000	.19635	11.25
.34120	.11333	.13090	7.50
.34559	.05667	.06545	3.75
.34707	.00000	.00000	.00

707

-.24634

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

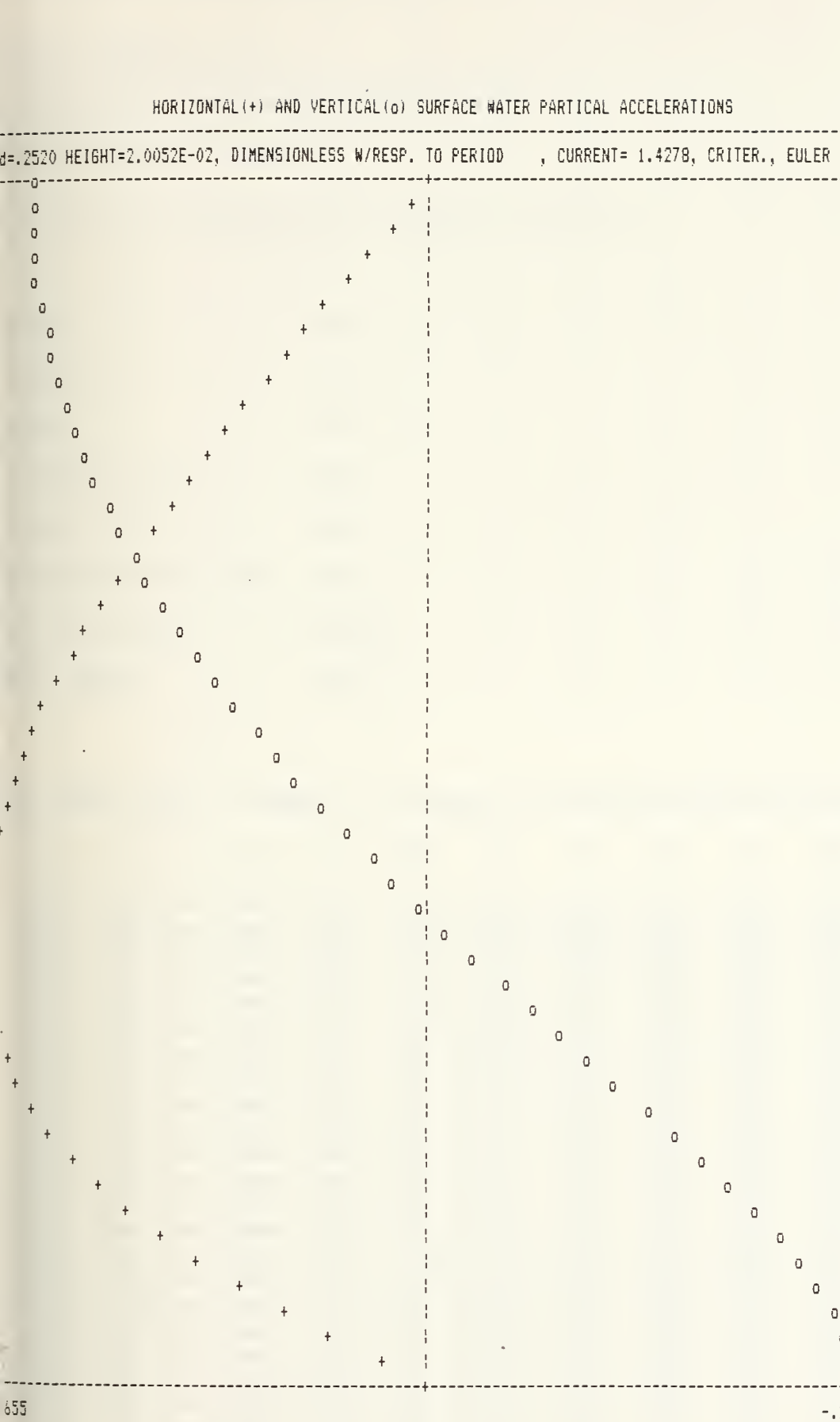
=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= 1.4278, CRITER., EULER

U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.10386	.00000	3.14159	180.00
-.10351	.01373	3.07614	176.25
-.10243	.02743	3.01069	172.50
-.10064	.04108	2.94524	168.75
-.09813	.05466	2.87979	165.00
-.09490	.06813	2.81434	161.25
-.09096	.08149	2.74889	157.50
-.08629	.09469	2.68344	153.75
-.08091	.10771	2.61799	150.00
-.07481	.12053	2.55254	146.25
-.06799	.13312	2.48709	142.50
-.06044	.14545	2.42164	138.75
-.05218	.15748	2.35619	135.00
-.04320	.16920	2.29074	131.25
-.03349	.18056	2.22529	127.50
-.02307	.19154	2.15984	123.75
-.01193	.20209	2.09440	120.00
-.00006	.21220	2.02895	116.25
.01252	.22180	1.96350	112.50
.02581	.23088	1.89805	108.75
.03981	.23938	1.83260	105.00
.05452	.24726	1.76715	101.25
.06993	.25447	1.70170	97.50
.08603	.26097	1.63625	93.75
.10281	.26670	1.57080	90.00
.12026	.27160	1.50535	86.25
.13836	.27562	1.43990	82.50
.15709	.27869	1.37445	78.75
.17642	.28074	1.30900	75.00
.19633	.28170	1.24355	71.25
.21677	.28150	1.17810	67.50
.23768	.28005	1.11265	63.75
.25903	.27727	1.04720	60.00
.28072	.27307	.98175	56.25
.30267	.26735	.91630	52.50
.32477	.26002	.85085	48.75
.34689	.25098	.78540	45.00
.36886	.24015	.71995	41.25
.39050	.22744	.65450	37.50
.41158	.21278	.58905	33.75
.43184	.19611	.52360	30.00
.45098	.17742	.45815	26.25
.46866	.15674	.39270	22.50
.48452	.13413	.32725	18.75
.49818	.10975	.26180	15.00
.50928	.08381	.19635	11.25
.51748	.05662	.13090	7.50
.52252	.02854	.06545	3.75
.52422	.00000	.00000	.00

22 -.10386

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= 1.4278, CRITER., EULER



655

-.27578

Ax	Ay	DIST.	ANGLE
‡1/6	‡1/6	‡K	DEGREES
.00000	.26408	3.14159	180.00
.01378	.26377	3.07614	176.25
.02755	.26283	3.01069	172.50
.04126	.26127	2.94524	168.75
.05492	.25908	2.87979	165.00
.06848	.25627	2.81434	161.25
.08194	.25283	2.74889	157.50
.09526	.24877	2.68344	153.75
.10843	.24409	2.61799	150.00
.12141	.23878	2.55254	146.25
.13419	.23285	2.48709	142.50
.14675	.22630	2.42164	138.75
.15904	.21913	2.35619	135.00
.17106	.21134	2.29074	131.25
.18276	.20294	2.22529	127.50
.19412	.19391	2.15984	123.75
.20510	.18428	2.09440	120.00
.21568	.17403	2.02895	116.25
.22583	.16318	1.96350	112.50
.23549	.15172	1.89805	108.75
.24464	.13967	1.83260	105.00
.25323	.12702	1.76715	101.25
.26121	.11379	1.70170	97.50
.26855	.09998	1.63625	93.75
.27517	.08561	1.57080	90.00
.28104	.07068	1.50535	86.25
.28608	.05521	1.43990	82.50
.29023	.03922	1.37445	78.75
.29341	.02273	1.30900	75.00
.29555	.00577	1.24355	71.25
.29655	-.01163	1.17810	67.50
.29631	-.02944	1.11265	63.75
.29474	-.04760	1.04720	60.00
.29171	-.06606	.98175	56.25
.28709	-.08475	.91630	52.50
.28075	-.10359	.85085	48.75
.27255	-.12246	.78540	45.00
.26235	-.14123	.71995	41.25
.24998	-.15977	.65450	37.50
.23531	-.17787	.58905	33.75
.21823	-.19531	.52360	30.00
.19863	-.21185	.45815	26.25
.17649	-.22718	.39270	22.50
.15185	-.24098	.32725	18.75
.12483	-.25291	.26180	15.00
.09571	-.26264	.19635	11.25
.06485	-.26985	.13090	7.50
.03275	-.27428	.06545	3.75
.00000	-.27578	.00000	.00

EADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

TH: DEEP , HEIGHT/DEPTH= .2520

E HEIGHT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

RRENT CRITERION: EULER , MAGNITUDE= .29

TION OF ORDER 12 NON-DIMENSIONALIZED BY WAVE NUMBER, 1 HEIGHT STEP(S).

E HEIGHT	.51575
E PERIOD	5.0716
E SPEED	1.2389
N EULERIAN FLUID SPEED	.20508
N MASS TRANSPORT SPEED	.20508
N FLUID SPEED RELATIVE TO WAVE	1.0338
UME FLUX DUE TO WAVES	3.18809E-02
NOULLI CONSTANT	.53438

TION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.29454	.54630	.00000	.00000	-.24366	.00000	.2984434	.0000000	1.0254910	.0000000	.0000000	.0000000	.0000000	.0000000
.15137	.49958	.00000	.00000	-.22339	.10972	.2495826	.0000000	.8218656	.0000000	.0392310	.0000000	.1322450	.0000000
.00819	.45943	.00000	.00000	-.20259	.22240	.2110731	.0000000	.6648355	.0000000	.0722076	.0000000	.2386721	.0000000
-.13498	.42486	.00000	.00000	-.18222	.33804	.1805094	.0000000	.5427222	.0000000	.1002394	.0000000	.3251164	.0000000
-.27815	.39508	.00000	.00000	-.16284	.45652	.1560893	.0000000	.4469530	.0000000	.1243352	.0000000	.3959634	.0000000
-.42132	.36940	.00000	.00000	-.14478	.57769	.1364527	.0000000	.3711883	.0000000	.1452772	.0000000	.4545309	.0000000
-.56449	.34722	.00000	.00000	-.12819	.70134	.1205650	.0000000	.3107081	.0000000	.1636760	.0000000	.5033452	.0000000
-.70767	.32808	.00000	.00000	-.11312	.82726	.1076349	.0000000	.2619756	.0000000	.1800120	.0000000	.5443414	.0000000
-.85084	.31153	.00000	.00000	-.09954	.95522	.0970527	.0000000	.2223240	.0000000	.1946648	.0000000	.5790105	.0000000
-.99401	.29723	.00000	.00000	-.08739	1.08503	.0883461	.0000000	.1897304	.0000000	.2079367	.0000000	.6085079	.0000000
1.13718	.28486	.00000	.00000	-.07658	1.21648	.0811467	.0000000	.1626512	.0000000	.2200701	.0000000	.6337335	.0000000
1.28035	.27416	.00000	.00000	-.06700	1.34938	.0751657	.0000000	.1399013	.0000000	.2312599	.0000000	.6553920	.0000000
1.42353	.26491	.00000	.00000	-.05853	1.48358	.0701754	.0000000	.1205660	.0000000	.2416643	.0000000	.6740379	.0000000
1.56670	.25689	.00000	.00000	-.05108	1.61892	.0659949	.0000000	.1039350	.0000000	.2514122	.0000000	.6901090	.0000000
1.70987	.24996	.00000	.00000	-.04453	1.75526	.0624799	.0000000	.0894539	.0000000	.2606092	.0000000	.7039530	.0000000
1.85304	.24396	.00000	.00000	-.03879	1.89247	.0595145	.0000000	.0766874	.0000000	.2693423	.0000000	.7158464	.0000000
1.99622	.23876	.00000	.00000	-.03376	2.03046	.0570051	.0000000	.0652923	.0000000	.2776835	.0000000	.7260101	.0000000
2.13939	.23426	.00000	.00000	-.02937	2.16912	.0548756	.0000000	.0549966	.0000000	.2856926	.0000000	.7346212	.0000000
2.28256	.23036	.00000	.00000	-.02554	2.30837	.0530642	.0000000	.0455839	.0000000	.2934195	.0000000	.7418213	.0000000
2.42573	.22698	.00000	.00000	-.02219	2.44813	.0515198	.0000000	.0368810	.0000000	.3009063	.0000000	.7477247	.0000000
2.56890	.22405	.00000	.00000	-.01928	2.58834	.0502005	.0000000	.0287493	.0000000	.3081881	.0000000	.7524229	.0000000
2.71208	.22152	.00000	.00000	-.01674	2.72893	.0490715	.0000000	.0210770	.0000000	.3152946	.0000000	.7559897	.0000000
2.85525	.21933	.00000	.00000	-.01454	2.86987	.0481038	.0000000	.0137743	.0000000	.3222510	.0000000	.7584846	.0000000
2.99842	.21742	.00000	.00000	-.01262	3.01110	.0472733	.0000000	.0067682	.0000000	.3290786	.0000000	.7599552	.0000000
3.14159	.21578	.00000	.00000	-.01095	3.15259	.0465596	.0000000	.0000000	.0000000	.3357958	.0000000	.7604397	.0000000

UTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.27764	.52788	.08919	.09697	-.22698	.00000	.2786584	.0969708	.9527965	.3315652	.0000000	.0000000	.0000000	.0000000
.13517	.48407	.07671	.08282	-.20899	.11139	.2343255	.0828247	.7678284	.2713966	.0365418	.0128075	.1225668	.0429513
-.00730	.44633	.06607	.07091	-.19020	.22542	.1992128	.0709072	.6243910	.2222440	.0674245	.0237585	.2217401	.0781153
-.14977	.41379	.05697	.06082	-.17156	.34213	.1712206	.0608232	.5122619	.1819723	.0938119	.0331421	.3027083	.1069092
-.29224	.38570	.04917	.05226	-.15369	.46144	.1487636	.0522587	.4238805	.1489036	.1166056	.0411974	.3693934	.1304788
-.43470	.36144	.04246	.04496	-.13693	.58322	.1306370	.0449620	.3536197	.1217070	.1365084	.0481228	.4247778	.1497554
-.57717	.34047	.03670	.03873	-.12146	.70730	.1159195	.0387289	.2972663	.0993173	.1540716	.0540844	.4711430	.1654999
-.71964	.32234	.03173	.03339	-.10736	.83348	.1039024	.0333926	.2516466	.0808754	.1697304	.0592219	.5102442	.1783357
-.86211	.30666	.02745	.02882	-.09461	.96158	.0940373	.0288155	.2143566	.0656845	.1838304	.0636533	.5434394	.1887757
-1.00458	.29308	.02375	.02488	-.08318	1.09140	.0858975	.0248833	.1835645	.0531760	.1966478	.0674784	.5717849	.1972426
-1.14704	.28133	.02056	.02150	-.07298	1.22275	.0791490	.0215005	.1578666	.0428838	.2084047	.0707825	.5961064	.2040853
-1.28951	.27116	.01780	.01859	-.06393	1.35548	.0735288	.0185871	.1361814	.0344249	.2192806	.0736381	.6170526	.2095924
-1.43198	.26235	.01542	.01608	-.05591	1.48943	.0688287	.0160755	.1176705	.0274829	.2294213	.0761073	.6351354	.2140023
-1.57445	.25472	.01335	.01391	-.04884	1.62444	.0648829	.0139085	.1016811	.0217967	.2389461	.0782432	.6507607	.2175127
1.71691	.24811	.01157	.01204	-.04262	1.76040	.0615587	.0120375	.0877014	.0171495	.2479530	.0800914	.6642511	.2202870
1.85938	.24238	.01002	.01042	-.03716	1.89720	.0587491	.0104210	.0753287	.0133619	.2565230	.0816912	.6758644	.2224604
2.00185	.23742	.00869	.00902	-.03238	2.03472	.0563674	.0090237	.0642443	.0102847	.2647232	.0830763	.6858067	.2241448
2.14432	.23312	.00753	.00782	-.02819	2.17288	.0543432	.0078154	.0541951	.0077941	.2726095	.0842759	.6942436	.2254327
2.28679	.22939	.00653	.00677	-.02453	2.31160	.0526187	.0067701	.0449788	.0057871	.2802289	.0853148	.7013082	.2264001
2.42925	.22616	.00566	.00587	-.02134	2.45080	.0511464	.0058654	.0364336	.0041782	.2876204	.0862149	.7071075	.2271100
2.57172	.22335	.00490	.00508	-.01855	2.59043	.0498870	.0050823	.0284292	.0028963	.2948174	.0869948	.7117279	.2276139
2.71419	.22093	.00425	.00440	-.01613	2.73043	.0488080	.0044043	.0208607	.0018824	.3018479	.0876705	.7152390	.2279543
2.85666	.21882	.00368	.00382	-.01401	2.87076	.0478820	.0038171	.0136433	.0010876	.3087355	.0882562	.7176969	.2281659
2.99912	.21699	.00319	.00331	-.01217	3.01136	.0470865	.0033084	.0067083	.0004713	.3155005	.0887637	.7191466	.2282769
3.14159	.21541	.00277	.00287	-.01057	3.15221	.0464021	.0028678	.0000000	.0000000	.3221600	.0892037	.7196245	.2283105

TION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.23213	.47869	.16306	.17532	-.18265	.00000	.2291431	.1753186	.7730659	.5914768	.0000000	.0000000	.0000000	.0000000
.09156	.44242	.14077	.15061	-.17045	.11573	.1957356	.1506149	.6328432	.4869611	.0298630	.0229085	.0988156	.0757990
-.04901	.41100	.12164	.12959	-.15679	.23329	.1689200	.1295874	.5223987	.4007595	.0554932	.0426028	.1800129	.1381933
-.18958	.38377	.10520	.11164	-.14269	.35281	.1472783	.1116432	.4347668	.3295718	.0777174	.0595579	.2472882	.1895253
-.33016	.36016	.09105	.09629	-.12878	.47431	.1297178	.0962947	.3646934	.2707265	.0971864	.0741731	.3034790	.2317178
-.47073	.33970	.07884	.08314	-.11547	.59772	.1153932	.0831391	.3081997	.2220535	.1144142	.0867847	.3507739	.2663533
-.61130	.32194	.06831	.07184	-.10300	.72295	.1036477	.0718428	.2622592	.1817834	.1298097	.0976778	.3908691	.2947374
-.75187	.30654	.05920	.06213	-.09150	.84986	.0939691	.0621275	.2245599	.1484674	.1436994	.1070940	.4250857	.3179494
-.89244	.29318	.05133	.05376	-.08100	.97832	.0859554	.0537604	.1933266	.1209153	.1563456	.1152393	.4544572	.3368832
1.03301	.28159	.04452	.04655	-.07150	1.10819	.0792904	.0465459	.1671900	.0981457	.1679600	.1222894	.4797965	.3522801
1.17359	.27152	.03862	.04032	-.06297	1.23932	.0737235	.0403188	.1450883	.0793476	.1787147	.1283948	.5017452	.3647554
1.31416	.26278	.03351	.03494	-.05535	1.37158	.0690552	.0349391	.1261939	.0638489	.1887501	.1336844	.5208126	.3748201
1.45473	.25520	.02908	.03029	-.04857	1.50486	.0651262	.0302879	.1098589	.0510916	.1981811	.1382689	.5374038	.3828988
1.59530	.24861	.02524	.02626	-.04256	1.63904	.0618081	.0262640	.0955733	.0406117	.2071028	.1422437	.5518428	.3893442
1.73587	.24289	.02191	.02278	-.03725	1.77401	.0589972	.0227807	.0829335	.0320232	.2155938	.1456908	.5643893	.3944494
1.87645	.23793	.01902	.01976	-.03256	1.90968	.0566093	.0197639	.0716190	.0250042	.2237193	.1486811	.5752521	.3984577
2.01702	.23361	.01652	.01715	-.02845	2.04597	.0545754	.0171499	.0613742	.0192864	.2315340	.1512757	.5845997	.4015707
2.15759	.22987	.01434	.01488	-.02483	2.18280	.0528392	.0148843	.0519940	.0146462	.2390837	.1535272	.5925679	.4039557
2.29816	.22661	.01246	.01292	-.02166	2.32011	.0513540	.0129199	.0433136	.0108970	.2464070	.1554814	.5992667	.4057510
2.43873	.22379	.01082	.01122	-.01889	2.45784	.0500811	.0112161	.0352000	.0078834	.2535365	.1571779	.6047851	.4070710
2.57931	.22133	.00940	.00974	-.01646	2.59593	.0489883	.0097382	.0275455	.0054756	.2604997	.1586507	.6091952	.4080099
2.71988	.21920	.00816	.00846	-.01434	2.73434	.0480489	.0084558	.0202630	.0035659	.2673200	.1599294	.6125554	.4086454
2.86045	.21735	.00709	.00734	-.01249	2.87303	.0472402	.0073428	.0132813	.0020644	.2740175	.1610399	.6149131	.4090412
3.00102	.21574	.00616	.00638	-.01087	3.01196	.0465433	.0063769	.0065427	.0008964	.2806092	.1620042	.6163065	.4092493
3.14159	.21434	.00535	.00554	-.00946	3.15111	.0459420	.0055383	.0000000	.0000000	.2871096	.1628416	.6167663	.4093123

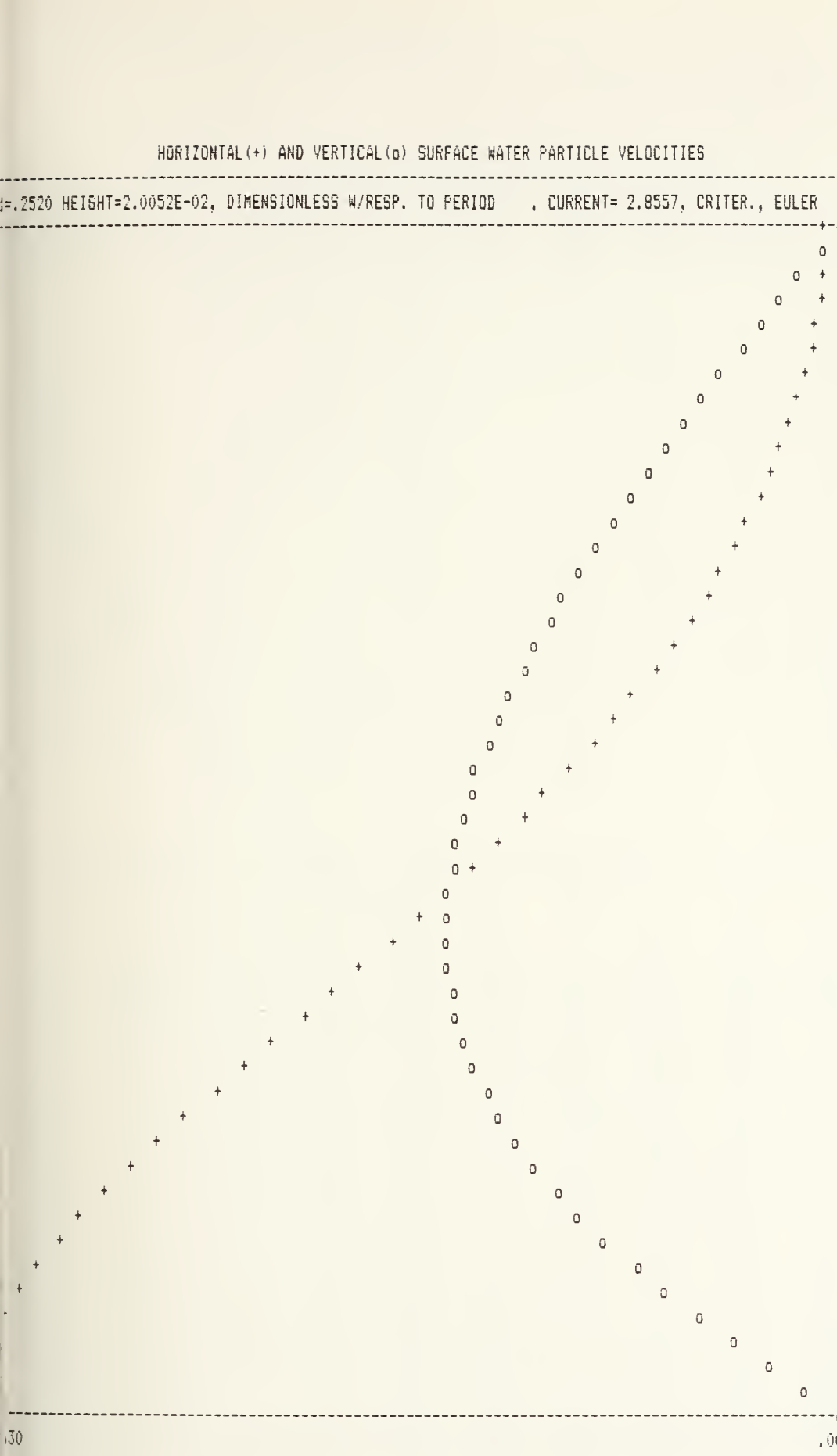
WATER SURFACE ELEVATION

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= 2.8557, CRITER., EULER

ELEV.VS.	TIME	DIST.	ANGLE
‡K	(K‡6)^.5	‡K	DEGREES
-.22121	2.53580	3.14159	180.00
-.22088	2.48297	3.07614	176.25
-.21987	2.43015	3.01069	172.50
-.21819	2.37732	2.94524	168.75
-.21584	2.32449	2.87979	165.00
-.21281	2.27166	2.81434	161.25
-.20912	2.21883	2.74889	157.50
-.20476	2.16600	2.68344	153.75
-.19974	2.11317	2.61799	150.00
-.19405	2.06034	2.55254	146.25
-.18770	2.00751	2.48709	142.50
-.18070	1.95468	2.42164	138.75
-.17304	1.90185	2.35619	135.00
-.16473	1.84902	2.29074	131.25
-.15578	1.79619	2.22529	127.50
-.14619	1.74336	2.15984	123.75
-.13597	1.69054	2.09440	120.00
-.12513	1.63771	2.02895	116.25
-.11367	1.58488	1.96350	112.50
-.10162	1.53205	1.89805	108.75
-.08898	1.47922	1.83260	105.00
-.07576	1.42639	1.76715	101.25
-.06199	1.37356	1.70170	97.50
-.04769	1.32073	1.63625	93.75
-.03287	1.26790	1.57080	90.00
-.01757	1.21507	1.50535	86.25
-.00182	1.16224	1.43990	82.50
.01436	1.10941	1.37445	78.75
.03090	1.05658	1.30900	75.00
.04778	1.00376	1.24355	71.25
.06493	.95093	1.17810	67.50
.08229	.89810	1.11265	63.75
.09978	.84527	1.04720	60.00
.11733	.79244	.98175	56.25
.13484	.73961	.91630	52.50
.15221	.68678	.85085	48.75
.16931	.63395	.78540	45.00
.18601	.58112	.71995	41.25
.20215	.52829	.65450	37.50
.21759	.47546	.58905	33.75
.23213	.42263	.52360	30.00
.24560	.36980	.45815	26.25
.25780	.31698	.39270	22.50
.26854	.26415	.32725	18.75
.27764	.21132	.26180	15.00
.28491	.15849	.19635	11.25
.29022	.10566	.13090	7.50
.29345	.05283	.06545	3.75
.29454	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= 2.8557, CRITER., EULER

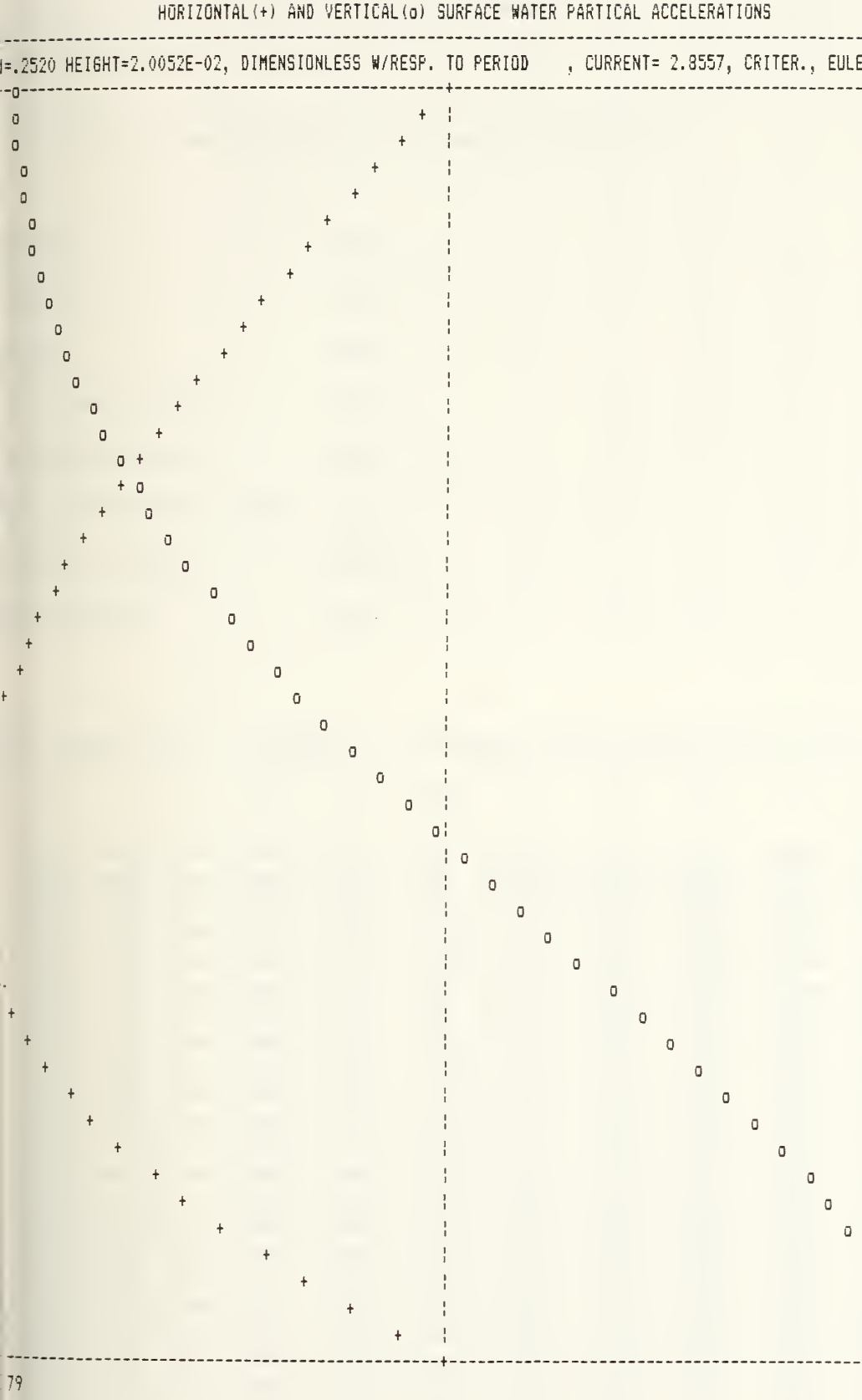


U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
.00959	.00000	3.14159	180.00
.00993	.01263	3.07614	176.25
.01094	.02523	3.01069	172.50
.01263	.03778	2.94524	168.75
.01500	.05025	2.87979	165.00
.01805	.06262	2.81434	161.25
.02176	.07486	2.74889	157.50
.02616	.08694	2.68344	153.75
.03122	.09884	2.61799	150.00
.03696	.11053	2.55254	146.25
.04337	.12198	2.48709	142.50
.05044	.13316	2.42164	138.75
.05818	.14404	2.35619	135.00
.06658	.15460	2.29074	131.25
.07564	.16479	2.22529	127.50
.08535	.17459	2.15984	123.75
.09571	.18396	2.09440	120.00
.10672	.19286	2.02895	116.25
.11836	.20127	1.96350	112.50
.13062	.20913	1.89805	108.75
.14350	.21642	1.83260	105.00
.15699	.22308	1.76715	101.25
.17106	.22908	1.70170	97.50
.18570	.23437	1.63625	93.75
.20090	.23890	1.57080	90.00
.21662	.24261	1.50535	86.25
.23284	.24547	1.43990	82.50
.24953	.24741	1.37445	78.75
.26664	.24837	1.30900	75.00
.28414	.24831	1.24355	71.25
.30197	.24715	1.17810	67.50
.32006	.24484	1.11265	63.75
.33835	.24131	1.04720	60.00
.35676	.23651	.98175	56.25
.37518	.23038	.91630	52.50
.39350	.22285	.85085	48.75
.41161	.21389	.78540	45.00
.42935	.20345	.71995	41.25
.44657	.19151	.65450	37.50
.46308	.17804	.58905	33.75
.47869	.16306	.52360	30.00
.49319	.14661	.45815	26.25
.50637	.12874	.39270	22.50
.51801	.10955	.32725	18.75
.52788	.08919	.26180	15.00
.53580	.06783	.19635	11.25
.54159	.04568	.13090	7.50
.54511	.02298	.06545	3.75
.54630	.00000	.00000	.00

.30 .00000

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= 2.8557, CRITER., EULER



Ax	Ay	DIST.	ANGLE
%1/6	%1/6	%K	DEGREES
.00000	.23723	3.14159	180.00
.01271	.23692	3.07614	176.25
.02539	.23601	3.01069	172.50
.03803	.23448	2.94524	168.75
.05060	.23235	2.87979	165.00
.06307	.22960	2.81434	161.25
.07542	.22625	2.74889	157.50
.08763	.22229	2.68344	153.75
.09966	.21772	2.61799	150.00
.11151	.21255	2.55254	146.25
.12313	.20678	2.48709	142.50
.13450	.20041	2.42164	138.75
.14560	.19345	2.35619	135.00
.15639	.18589	2.29074	131.25
.16684	.17774	2.22529	127.50
.17693	.16902	2.15984	123.75
.18662	.15971	2.09440	120.00
.19587	.14983	2.02895	116.25
.20465	.13939	1.96350	112.50
.21293	.12840	1.89805	108.75
.22066	.11686	1.83260	105.00
.22780	.10478	1.76715	101.25
.23431	.09219	1.70170	97.50
.24013	.07909	1.63625	93.75
.24523	.06551	1.57080	90.00
.24954	.05147	1.50535	86.25
.25301	.03698	1.43990	82.50
.25559	.02209	1.37445	78.75
.25720	.00682	1.30900	75.00
.25779	-.00879	1.24355	71.25
.25727	-.02469	1.17810	67.50
.25559	-.04082	1.11265	63.75
.25265	-.05714	1.04720	60.00
.24839	-.07355	.98175	56.25
.24272	-.08999	.91630	52.50
.23557	-.10636	.85085	48.75
.22687	-.12254	.78540	45.00
.21653	-.13841	.71995	41.25
.20452	-.15382	.65450	37.50
.19079	-.16863	.58905	33.75
.17532	-.18265	.52360	30.00
.15813	-.19569	.45815	26.25
.13927	-.20756	.39270	22.50
.11883	-.21806	.32725	18.75
.09697	-.22698	.26180	15.00
.07388	-.23414	.19635	11.25
.04982	-.23938	.13090	7.50
.02509	-.24258	.06545	3.75
.00000	-.24366	.00000	.00

-.24366

EADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

TH: DEEP , HEIGHT/DEPTH= .2520

E HEIGHT 2.005161E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

RRENT CRITERION: EULER , MAGNITUDE= -.14

UTION OF ORDER 12 NON-DIMENSIONALIZED BY WAVE NUMBER, 1 HEIGHT STEP(S).

VE HEIGHT	.86795
VE PERIOD	6.5792
VE SPEED	.95501
AN EULERIAN FLUID SPEED	-.13302
AN MASS TRANSPORT SPEED	-.13302
AN FLUID SPEED RELATIVE TO WAVE	1.0880
LUME FLUX DUE TO WAVES	6.45200E-02
RNOULLI CONSTANT	.59121

UTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.59121	.95529	.00000	.00000	.00099	.00000	.9125790	.0000000	3.4064795	.0000000	.0000000	.0000000	.0000000	.0000000
.43568	.59551	.00000	.00000	-.54340	.09091	.3546345	.0000000	1.2686240	.0000000	.0985471	.0000000	.3635677	.0000000
.28015	.41885	.00000	.00000	-.46365	.16734	.1754379	.0000000	.6003027	.0000000	.1397691	.0000000	.5089081	.0000000
.12461	.30813	.00000	.00000	-.38259	.25737	.0949447	.0000000	.3101089	.0000000	.1607959	.0000000	.5797079	.0000000
-.03092	.22859	.00000	.00000	-.32244	.35829	.0522552	.0000000	.1625486	.0000000	.1722432	.0000000	.6164649	.0000000
-.18646	.16737	.00000	.00000	-.27521	.46748	.0280130	.0000000	.0827822	.0000000	.1784854	.0000000	.6355435	.0000000
-.34199	.11850	.00000	.00000	-.23621	.58333	.0140433	.0000000	.0393157	.0000000	.1817560	.0000000	.6450387	.0000000
-.49752	.07868	.00000	.00000	-.20318	.70476	.0061913	.0000000	.0163702	.0000000	.1833295	.0000000	.6493692	.0000000
-.65306	.04582	.00000	.00000	-.17487	.83095	.0020991	.0000000	.0052237	.0000000	.1839743	.0000000	.6510485	.0000000
-.80859	.01845	.00000	.00000	-.15049	.96123	.0003404	.0000000	.0007942	.0000000	.1841640	.0000000	.6515165	.0000000
-.96412	-.00447	.00000	.00000	-.12945	1.09503	-.0000200	.0000000	-.0000435	.0000000	.1841889	.0000000	.6515749	.0000000
-1.11966	-.02375	.00000	.00000	-.11131	1.23188	-.0005643	.0000000	-.0011409	.0000000	.1841435	.0000000	.6514828	.0000000
-1.27519	-.04003	.00000	.00000	-.09565	1.37135	-.0016025	.0000000	-.0029910	.0000000	.1839749	.0000000	.6511614	.0000000
-1.43072	-.05381	.00000	.00000	-.08216	1.51308	-.0028952	.0000000	-.0049533	.0000000	.1836252	.0000000	.6505436	.0000000
-1.58626	-.06549	.00000	.00000	-.07054	1.65676	-.0042887	.0000000	-.0066704	.0000000	.1830665	.0000000	.6496397	.0000000
-1.74179	-.07541	.00000	.00000	-.06054	1.80212	-.0056867	.0000000	-.0079602	.0000000	.1822907	.0000000	.6485019	.0000000
-1.89732	-.08385	.00000	.00000	-.05194	1.94892	-.0070304	.0000000	-.0087477	.0000000	.1813018	.0000000	.6472026	.0000000
-2.05286	-.09103	.00000	.00000	-.04454	2.09697	-.0082867	.0000000	-.0090220	.0000000	.1801106	.0000000	.6458207	.0000000
-2.20839	-.09715	.00000	.00000	-.03819	2.24608	-.0094385	.0000000	-.0088080	.0000000	.1787322	.0000000	.6444341	.0000000
-2.36392	-.10237	.00000	.00000	-.03274	2.39611	-.0104799	.0000000	-.0081499	.0000000	.1771832	.0000000	.6431153	.0000000
-2.51946	-.10682	.00000	.00000	-.02806	2.54693	-.0114114	.0000000	-.0070994	.0000000	.1754808	.0000000	.6419295	.0000000
-2.67499	-.11063	.00000	.00000	-.02404	2.69842	-.0122380	.0000000	-.0057103	.0000000	.1736416	.0000000	.6409333	.0000000
-2.83053	-.11387	.00000	.00000	-.02060	2.85048	-.0129668	.0000000	-.0040335	.0000000	.1716815	.0000000	.6401755	.0000000
-2.98606	-.11664	.00000	.00000	-.01764	3.00305	-.0136060	.0000000	-.0021162	.0000000	.1696151	.0000000	.6396973	.0000000
-3.14159	-.11901	.00000	.00000	-.01511	3.15604	-.0141645	.0000000	.0000000	.0000000	.1674554	.0000000	.6395327	.0000000

UTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

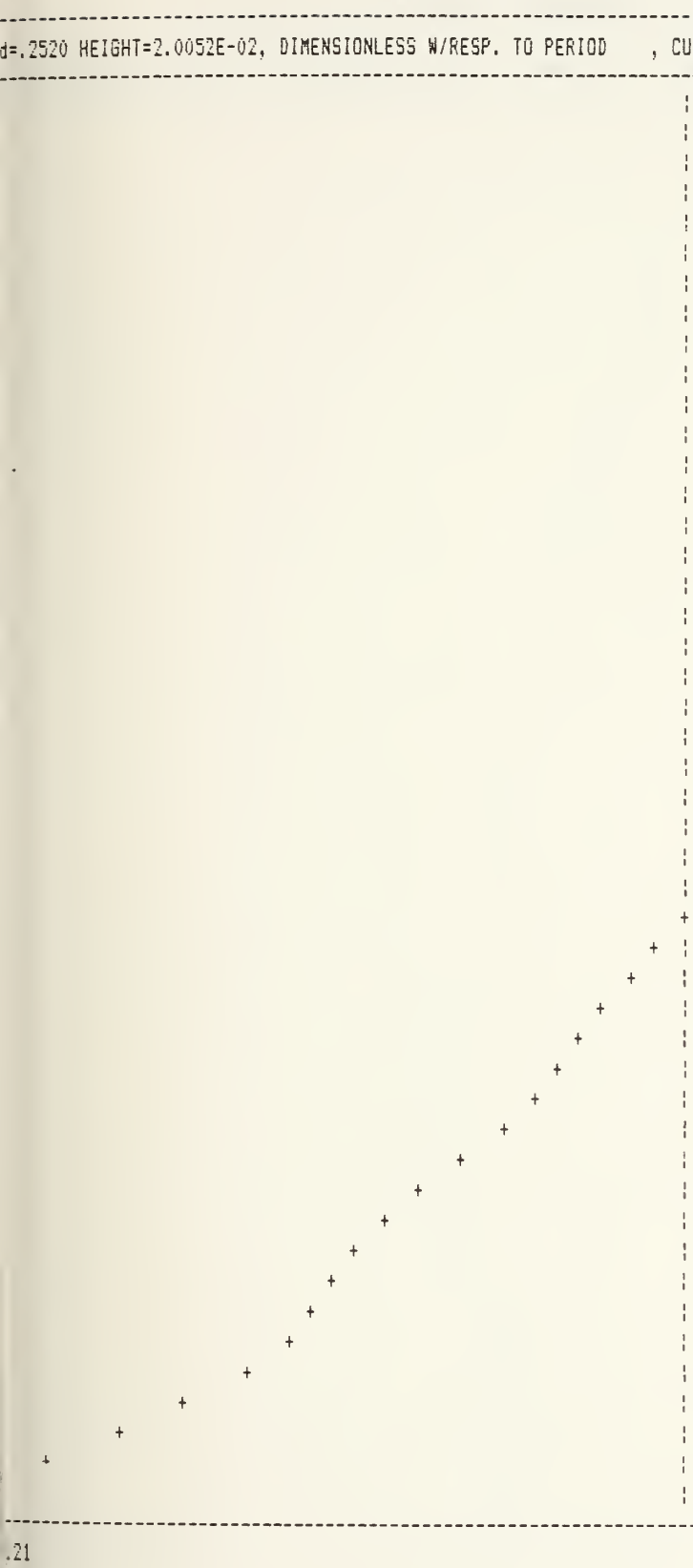
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.41269	.42137	.26886	.54033	-.07345	.00000	.1775541	.5403319	.6310769	1.9204902	.0000000	.0000000	.0000000	.0000000
.26459	.34109	.18721	.34656	-.25308	.12065	.1163403	.3465611	.3962764	1.1804508	.0217621	.0656722	.0760729	.2296168
.11650	.26713	.14062	.23446	-.28199	.22824	.0713560	.2344617	.2324843	.7638970	.0356606	.1086955	.1226310	.3735909
-.03160	.20478	.11049	.16843	-.26895	.33528	.0419342	.1684253	.1304152	.5238016	.0440494	.1385282	.1495028	.4689417
-.17969	.15300	.08923	.12684	-.24429	.44531	.0234080	.1268395	.0693321	.3756857	.0488879	.1603918	.1642936	.5355465
-.32779	.10991	.07333	.09883	-.21749	.55921	.0120799	.0988310	.0339904	.2780912	.0515156	.1771022	.1719444	.5839570
-.47588	.07386	.06097	.07889	-.19174	.67703	.0054560	.0788903	.0145440	.2102986	.0528141	.1902620	.1755382	.6201210
-.62398	.04355	.05111	.06407	-.16808	.79851	.0018970	.0640725	.0047759	.1613098	.0533586	.2008480	.1769688	.6476377
-.77207	.01795	.04310	.05270	-.14681	.92332	.0003222	.0527002	.0007635	.1248742	.0535229	.2094947	.1773790	.6688289
-.92017	-.00376	.03650	.04376	-.12791	1.05110	-.0000141	.0437577	-.0000313	.0972043	.0535457	.2166372	.1774332	.6852732
-1.06826	-.02221	.03102	.03659	-.11123	1.18151	-.0004934	.0365948	-.0010230	.0758730	.0535082	.2225871	.1773552	.6980891
-1.21636	-.03794	.02643	.03078	-.09659	1.31424	-.0014397	.0307756	-.0027718	.0592502	.0533650	.2275757	.1770742	.7080947
-1.36445	-.05138	.02256	.02600	-.08378	1.44900	-.0026397	.0259957	-.0046911	.0461979	.0530630	.2317795	.1765216	.7159028
-1.51255	-.06287	.01929	.02204	-.07261	1.58554	-.0039524	.0220353	-.0064386	.0358964	.0525748	.2353360	.1756974	.7219817
-1.66064	-.07271	.01652	.01873	-.06287	1.72362	-.0052865	.0187312	-.0078291	.0277399	.0518907	.2383547	.1746409	.7266938
-1.80874	-.08115	.01416	.01596	-.05441	1.86304	-.0065845	.0159593	-.0087762	.0212714	.0510117	.2409234	.1734114	.7303230
-1.95683	-.08838	.01215	.01362	-.04706	2.00364	-.0078119	.0136234	-.0092552	.0161404	.0499457	.2431139	.1720762	.7330932
-2.10493	-.09460	.01044	.01165	-.04069	2.14524	-.0089495	.0116476	-.0092776	.0120747	.0487045	.2449852	.1707039	.7351825
-2.25302	-.09994	.00897	.00997	-.03517	2.28773	-.0099887	.0099714	-.0088757	.0088603	.0473022	.2465860	.1693597	.7367327
-2.40112	-.10454	.00771	.00855	-.03038	2.43098	-.0109278	.0085458	-.0080918	.0063279	.0457534	.2479572	.1681033	.7378573
-2.54921	-.10849	.00663	.00733	-.02624	2.57489	-.0117693	.0073307	-.0069719	.0043425	.0440727	.2491328	.1669879	.7386475
-2.69731	-.11189	.00571	.00629	-.02266	2.71937	-.0125183	.0062932	-.0055617	.0027960	.0422743	.2501416	.1660598	.7391761
-2.84540	-.11481	.00491	.00541	-.01957	2.86435	-.0131815	.0054061	-.0039042	.0016012	.0403713	.2510079	.1653588	.7395017
-2.99350	-.11733	.00423	.00465	-.01689	3.00975	-.0137662	.0046466	-.0020387	.0006881	.0383759	.2517523	.1649188	.7396712
-3.14159	-.11950	.00364	.00400	-.01458	3.15551	-.0142798	.0039957	.0000000	.0000000	.0362991	.2523922	.1647678	.7397221

UTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.29422	.24597	.30209	.37000	-.10188	.00000	.0605034	.3700029	.2078782	1.2712596	.0000000	.0000000	.0000000	.0000000
.15106	.20158	.25004	.32724	-.14773	.12507	.0406351	.3272390	.1337973	1.0774839	.0072394	.0499081	.0244569	.1681216
.00790	.15914	.20708	.27287	-.17063	.24517	.0253243	.2728710	.0797586	.8594051	.0119608	.0928636	.0397431	.3067629
-.13526	.12054	.17252	.22413	-.17488	.36342	.0145301	.2241334	.0436824	.6738197	.0148135	.1284389	.0485789	.4165101
-.27842	.08639	.14466	.18414	-.16842	.48192	.0074634	.1841444	.0213690	.5272375	.0163878	.1576632	.0532353	.5024810
-.42158	.05659	.12201	.15209	-.15666	.60177	.0032023	.1520943	.0087102	.4136989	.0171512	.1817309	.0553883	.5698327
-.56474	.03076	.10340	.12644	-.14273	.72348	.0009460	.1264383	.0024377	.3258133	.0174482	.2016681	.0561863	.6227665
-.70789	.00844	.08796	.10576	-.12832	.84724	.0000712	.1057643	.0001733	.2573985	.0175210	.2182890	.0563732	.6645124
-.85105	-.01082	.07507	.08896	-.11436	.97304	-.0001170	.0889569	-.0002680	.2037592	.0175177	.2322270	.0563664	.6975218
-.99421	-.02743	.06423	.07517	-.10129	1.10077	-.0007522	.0751709	-.0016152	.1614205	.0174555	.2439752	.0562316	.7236612
-1.13737	-.04175	.05507	.06377	-.08931	1.23030	-.0017431	.0637715	-.0034935	.1278122	.0172769	.2539206	.0558659	.7443642
-1.28053	-.05411	.04729	.05428	-.07849	1.36146	-.0029277	.0542788	-.0054487	.1010163	.0169425	.2623706	.0552259	.7607436
-1.42369	-.06477	.04067	.04633	-.06880	1.49409	-.0041958	.0463261	-.0072080	.0795839	.0164327	.2695718	.0543199	.7736709
-1.56685	-.07398	.03502	.03963	-.06019	1.62803	-.0054738	.0396296	-.0086198	.0624066	.0157405	.2757244	.0531870	.7838345
-1.71001	-.08194	.03018	.03397	-.05257	1.76313	-.0067142	.0339664	-.0096120	.0486259	.0148681	.2809924	.0518819	.7917821
-1.85316	-.08881	.02603	.02916	-.04586	1.89925	-.0078881	.0291598	-.0101633	.0375703	.0138229	.2855109	.0504664	.7979520
-1.99632	-.09476	.02247	.02507	-.03997	2.03628	-.0089790	.0250676	-.0102834	.0287091	.0126155	.2893925	.0490029	.8026962
-2.13948	-.09990	.01941	.02157	-.03480	2.17409	-.0099793	.0215746	-.0100003	.0216202	.0112585	.2927311	.0475510	.8062988
-2.28264	-.10434	.01677	.01859	-.03028	2.31260	-.0108870	.0185866	-.0093514	.0159650	.0097649	.2956058	.0461658	.8089891
-2.42580	-.10819	.01450	.01603	-.02633	2.45171	-.0117043	.0160258	-.0083778	.0114712	.0081479	.2980834	.0448968	.8109530
-2.56896	-.11151	.01253	.01383	-.02288	2.59136	-.0124353	.0138277	-.0071209	.0079182	.0064200	.3002203	.0437874	.8123408
-2.71212	-.11439	.01084	.01194	-.01988	2.73146	-.0130859	.0119384	-.0056201	.0051272	.0045932	.3020646	.0428754	.8132746
-2.85528	-.11689	.00938	.01031	-.01727	2.87196	-.0136626	.0103125	-.0039118	.0029527	.0026785	.3036573	.0421931	.8138530
-2.99843	-.11905	.00812	.00891	-.01499	3.01282	-.0141718	.0089121	-.0020288	.0012758	.0006862	.3050334	.0417679	.8141557
-3.14159	-.12091	.00703	.00770	-.01301	3.15397	-.0146203	.0077048	.0000000	.0000000	-.0013748	.3062228	.0416226	.8142470

WATER SURFACE ELEVATION

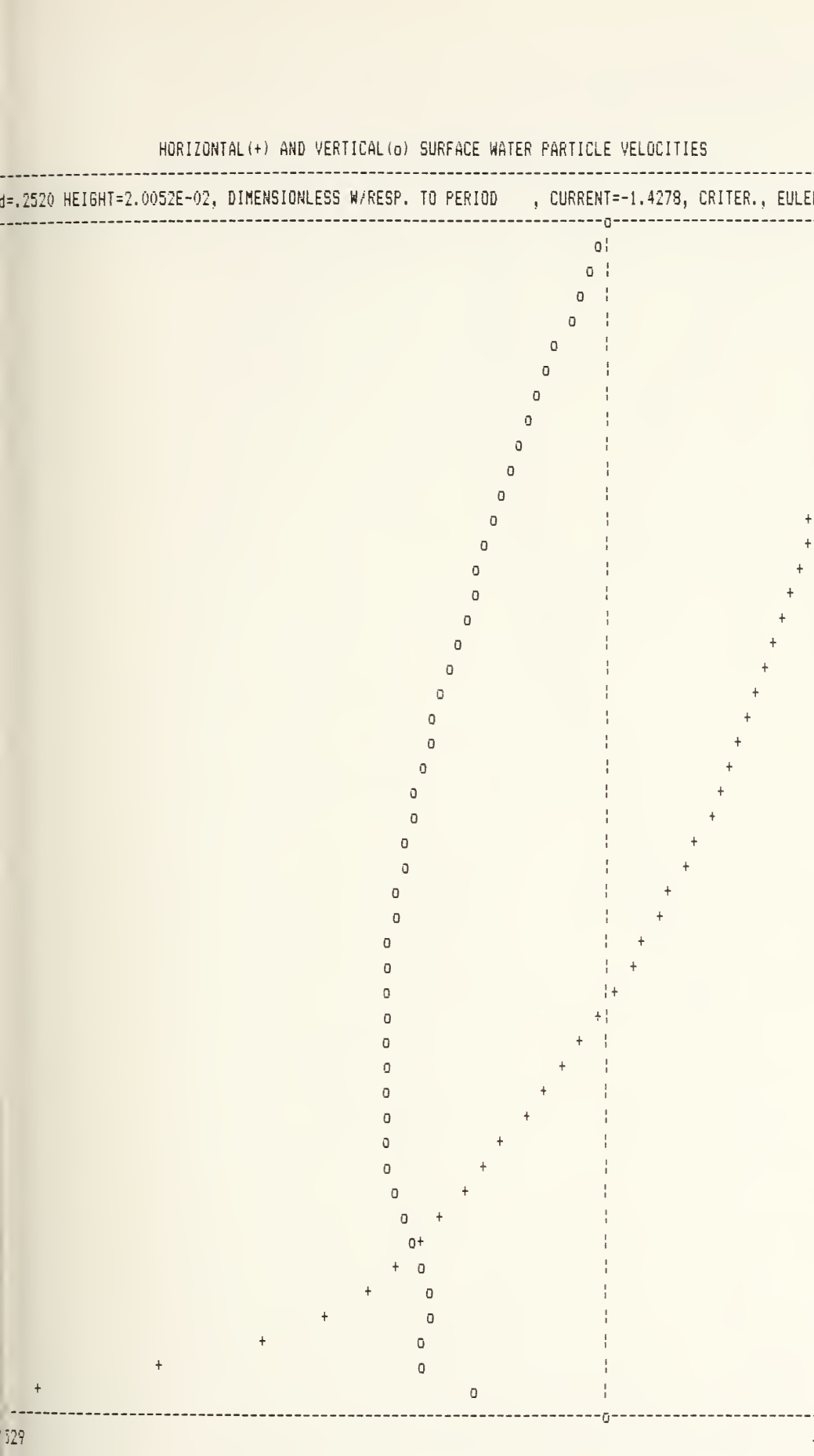
d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=-1.4278, CRITER., EULER



ELEV.VS.	TIME	DIST.	ANGLE
*K	(K*G)^.5	*K	DEGREES
-.27673	3.28959	3.14159	180.00
-.27649	3.22106	3.07614	176.25
-.27564	3.15253	3.01069	172.50
-.27389	3.08399	2.94524	168.75
-.27109	3.01546	2.87979	165.00
-.26735	2.94693	2.81434	161.25
-.26307	2.87839	2.74889	157.50
-.25863	2.80986	2.68344	153.75
-.25412	2.74133	2.61799	150.00
-.24914	2.67279	2.55254	146.25
-.24301	2.60426	2.48709	142.50
-.23522	2.53573	2.42164	138.75
-.22579	2.46719	2.35619	135.00
-.21538	2.39866	2.29074	131.25
-.20496	2.33013	2.22529	127.50
-.19521	2.26159	2.15984	123.75
-.18600	2.19306	2.09440	120.00
-.17636	2.12453	2.02895	116.25
-.16498	2.05600	1.96350	112.50
-.15100	1.98746	1.89805	108.75
-.13465	1.91893	1.83260	105.00
-.11721	1.85040	1.76715	101.25
-.10040	1.78186	1.70170	97.50
-.08532	1.71333	1.63625	93.75
-.07164	1.64480	1.57080	90.00
-.05767	1.57626	1.50535	86.25
-.04120	1.50773	1.43990	82.50
-.02083	1.43920	1.37445	78.75
.00305	1.37066	1.30900	75.00
.02825	1.30213	1.24355	71.25
.05188	1.23360	1.17810	67.50
.07209	1.16506	1.11265	63.75
.08933	1.09653	1.04720	60.00
.10641	1.02800	.98175	56.25
.12714	.95946	.91630	52.50
.15407	.89093	.85085	48.75
.18676	.82240	.78540	45.00
.22149	.75386	.71995	41.25
.25295	.68533	.65450	37.50
.27717	.61680	.58905	33.75
.29422	.54827	.52360	30.00
.30901	.47973	.45815	26.25
.32960	.41120	.39270	22.50
.36334	.34267	.32725	18.75
.41269	.27413	.26180	15.00
.47269	.20560	.19635	11.25
.53170	.13707	.13090	7.50
.57519	.06853	.06545	3.75
.59121	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=-1.4278, CRITER., EULER

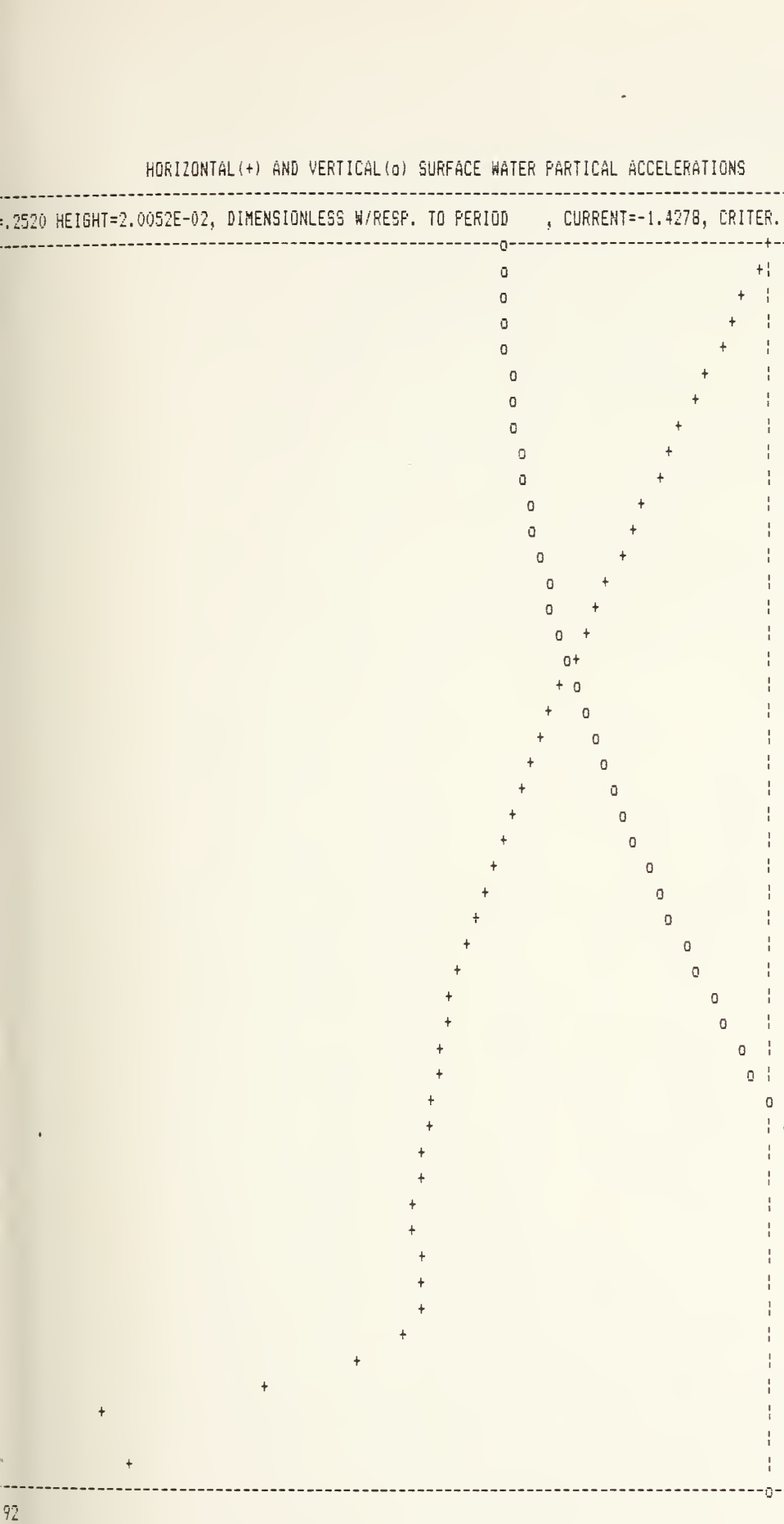


U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.36252	.00000	3.14159	180.00
-.36216	.01420	3.07614	176.25
-.36108	.02838	3.01069	172.50
-.35935	.04253	2.94524	168.75
-.35701	.05663	2.87979	165.00
-.35402	.07068	2.81434	161.25
-.35030	.08463	2.74889	157.50
-.34577	.09842	2.68344	153.75
-.34041	.11201	2.61799	150.00
-.33432	.12539	2.55254	146.25
-.32762	.13863	2.48709	142.50
-.32038	.15178	2.42164	138.75
-.31260	.16485	2.35619	135.00
-.30412	.17775	2.29074	131.25
-.29478	.19029	2.22529	127.50
-.28449	.20230	2.15984	123.75
-.27330	.21373	2.09440	120.00
-.26136	.22470	2.02895	116.25
-.24884	.23548	1.96350	112.50
-.23579	.24627	1.89805	108.75
-.22213	.25703	1.83260	105.00
-.20766	.26747	1.76715	101.25
-.19223	.27711	1.70170	97.50
-.17582	.28557	1.63625	93.75
-.15852	.29285	1.57080	90.00
-.14048	.29934	1.50535	86.25
-.12173	.30564	1.43990	82.50
-.10218	.31218	1.37445	78.75
-.08164	.31887	1.30900	75.00
-.06002	.32501	1.24355	71.25
-.03742	.32961	1.17810	67.50
-.01411	.33192	1.11265	63.75
.00972	.33197	1.04720	60.00
.03424	.33067	.98175	56.25
.05999	.32928	.91630	52.50
.08770	.32869	.85085	48.75
.11785	.32874	.78540	45.00
.15013	.32792	.71995	41.25
.18326	.32395	.65450	37.50
.21544	.31518	.58905	33.75
.24597	.30209	.52360	30.00
.27665	.28718	.45815	26.25
.31166	.27393	.39270	22.50
.35698	.26641	.32725	18.75
.42137	.26886	.26180	15.00
.52010	.28152	.19635	11.25
.67313	.28154	.13090	7.50
.86002	.20024	.06545	3.75
.95529	.00000	.00000	.00

329 -.36252

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT=-1.4278, CRITER., EULER



Ax	Ay	DIST.	ANGLE
*1/6	*1/6	*K	DEGREES
.00000	.28602	3.14159	180.00
.01386	.28572	3.07614	176.25
.02771	.28485	3.01069	172.50
.04153	.28351	2.94524	168.75
.05532	.28173	2.87979	165.00
.06908	.27948	2.81434	161.25
.08276	.27665	2.74889	157.50
.09632	.27312	2.68344	153.75
.10971	.26886	2.61799	150.00
.12295	.26401	2.55254	146.25
.13608	.25875	2.48709	142.50
.14917	.25324	2.42164	138.75
.16223	.24746	2.35619	135.00
.17518	.24121	2.29074	131.25
.18784	.23423	2.22529	127.50
.20008	.22634	2.15984	123.75
.21185	.21760	2.09440	120.00
.22329	.20828	2.02895	116.25
.23464	.19873	1.96350	112.50
.24606	.18915	1.89805	108.75
.25756	.17946	1.83260	105.00
.26885	.16933	1.76715	101.25
.27952	.15836	1.70170	97.50
.28922	.14631	1.63625	93.75
.29800	.13333	1.57080	90.00
.30623	.11982	1.50535	86.25
.31451	.10630	1.43990	82.50
.32325	.09300	1.37445	78.75
.33233	.07981	1.30900	75.00
.34107	.06624	1.24355	71.25
.34846	.05177	1.17810	67.50
.35386	.03625	1.11265	63.75
.35756	.02000	1.04720	60.00
.36074	.00361	.98175	56.25
.36487	-.01234	.91630	52.50
.37091	-.02761	.85085	48.75
.37853	-.04279	.78540	45.00
.38507	-.05924	.71995	41.25
.38590	-.07713	.65450	37.50
.37888	-.09291	.58905	33.75
.37000	-.10188	.52360	30.00
.37027	-.10410	.45815	26.25
.38910	-.10177	.39270	22.50
.43835	-.09274	.32725	18.75
.54033	-.07345	.26180	15.00
.71125	-.05079	.19635	11.25
.86192	-.03930	.13090	7.50
.68310	-.02105	.06545	3.75
.00000	.00099	.00000	.00

92

-.10410

9C, DEEP
WATER

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

DEPTH: FINITE, HEIGHT/DEPTH= .1280

WAVE HEIGHT 2.037581E-02, DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .00

SOLUTION OF ORDER 6 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

WATER DEPTH	5.5419
WAVE HEIGHT	.70951
WAVE PERIOD	5.9009
WAVE SPEED	1.0648
MEAN EULERIAN FLUID SPEED	-8.06501E-23
MEAN MASS TRANSPORT SPEED	1.02243E-02
MEAN FLUID SPEED RELATIVE TO WAVE	1.0648
VOLUME FLUX DUE TO WAVES	5.66623E-02
BERNOULLI CONSTANT	.56685

SOLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .1280, WAVE HEIGHT=2.03758E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.43239	.54620	.00000	.00000	-.32083	.00000	.2983366	.0000000	1.7823575	.0000000	.0000000	.0000000	.0000000	.0000000
.18346	.41434	.00000	.00000	-.29393	.17186	.1716785	.0000000	.9829260	.0000000	.0585004	.0000000	.3441808	.0000000
-.06547	.31695	.00000	.00000	-.25222	.35270	.1004561	.0000000	.5501433	.0000000	.0923716	.0000000	.5349942	.0000000
-.31440	.24376	.00000	.00000	-.20943	.54421	.0594190	.0000000	.3106145	.0000000	.1122705	.0000000	.6421283	.0000000
-.56333	.18816	.00000	.00000	-.17060	.74595	.0354039	.0000000	.1762617	.0000000	.1240726	.0000000	.7027273	.0000000
-.81226	.14561	.00000	.00000	-.13727	.95668	.0212035	.0000000	.1002856	.0000000	.1311182	.0000000	.7371478	.0000000
-1.06119	.11290	.00000	.00000	-.10953	1.17500	.0127461	.0000000	.0571120	.0000000	.1353438	.0000000	.7567382	.0000000
-1.31012	.08765	.00000	.00000	-.08688	1.39958	.0076833	.0000000	.0325142	.0000000	.1378865	.0000000	.7678936	.0000000
-1.55905	.06813	.00000	.00000	-.06862	1.62924	.0046412	.0000000	.0184854	.0000000	.1394205	.0000000	.7742412	.0000000
-1.80798	.05299	.00000	.00000	-.05403	1.86298	.0028083	.0000000	.0104862	.0000000	.1403477	.0000000	.7778472	.0000000
-2.05691	.04125	.00000	.00000	-.04243	2.09996	.0017017	.0000000	.0059305	.0000000	.1409090	.0000000	.7798905	.0000000
-2.30584	.03213	.00000	.00000	-.03325	2.33951	.0010325	.0000000	.0033414	.0000000	.1412493	.0000000	.7810445	.0000000
-2.55477	.02505	.00000	.00000	-.02602	2.58110	.0006274	.0000000	.0018742	.0000000	.1414559	.0000000	.7816937	.0000000
-2.80370	.01954	.00000	.00000	-.02032	2.82429	.0003819	.0000000	.0010458	.0000000	.1415816	.0000000	.7820571	.0000000
-3.05263	.01527	.00000	.00000	-.01584	3.06874	.0002331	.0000000	.0005802	.0000000	.1416581	.0000000	.7822595	.0000000
-3.30156	.01195	.00000	.00000	-.01232	3.31418	.0001428	.0000000	.0003199	.0000000	.1417049	.0000000	.7823715	.0000000
-3.55049	.00938	.00000	.00000	-.00955	3.56040	.0000880	.0000000	.0001752	.0000000	.1417336	.0000000	.7824331	.0000000
-3.79942	.00740	.00000	.00000	-.00736	3.80724	.0000547	.0000000	.0000953	.0000000	.1417514	.0000000	.7824668	.0000000
-4.04835	.00588	.00000	.00000	-.00563	4.05456	.0000345	.0000000	.0000516	.0000000	.1417625	.0000000	.7824851	.0000000
-4.29728	.00472	.00000	.00000	-.00424	4.30227	.0000223	.0000000	.0000277	.0000000	.1417696	.0000000	.7824950	.0000000
-4.54621	.00386	.00000	.00000	-.00312	4.55029	.0000149	.0000000	.0000149	.0000000	.1417742	.0000000	.7825003	.0000000
-4.79514	.00324	.00000	.00000	-.00218	4.79856	.0000105	.0000000	.0000079	.0000000	.1417774	.0000000	.7825031	.0000000
-5.04407	.00283	.00000	.00000	-.00138	5.04705	.0000080	.0000000	.0000040	.0000000	.1417797	.0000000	.7825046	.0000000
-5.29300	.00259	.00000	.00000	-.00067	5.29572	.0000067	.0000000	.0000017	.0000000	.1417815	.0000000	.7825053	.0000000
-5.54193	.00251	.00000	.00000	.00000	5.54457	.0000063	.0000000	.0000000	.0000000	.1417831	.0000000	.7825055	.0000000

LUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .1280, WAVE HEIGHT=2.03758E-02 DIMENSIONLESS W/RESP. TO PERIOD

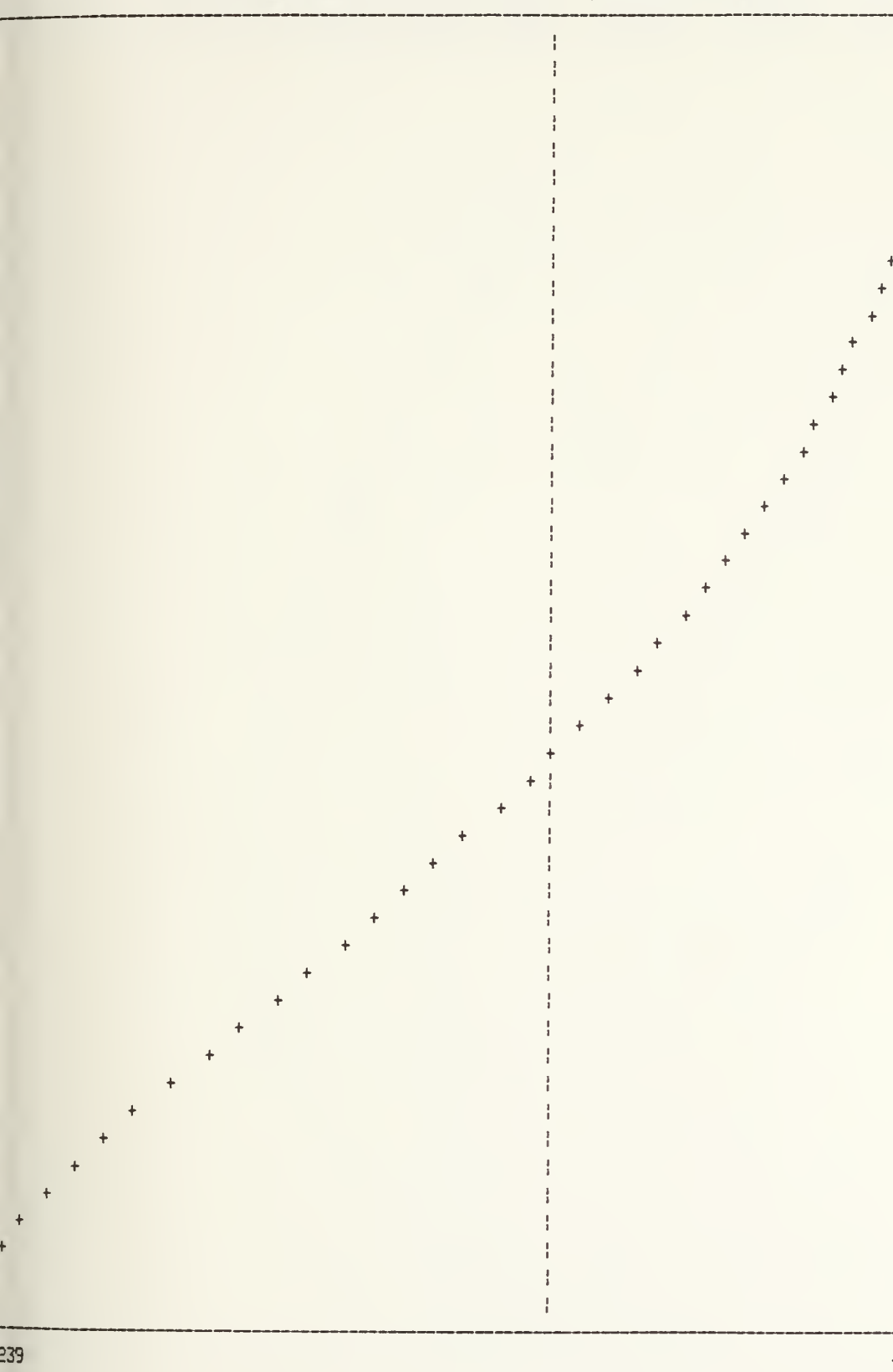
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.39635	.49870	.15066	.19112	-.28076	-.00107	.2487014	.1911172	1.4768575	1.1349065	.0000000	.0000000	.0000000	.0000000
.14892	.38152	.11124	.13546	-.26421	.17832	.1455552	.1354590	.8283324	.7708763	.0487751	.0404021	.2851844	.2357721
-.09851	.29351	.08360	.09858	-.23007	.36443	.0861457	.0985751	.4689270	.5365855	.0774397	.0693554	.4456736	.3975235
-.34594	.22668	.06353	.07311	-.19279	.55956	.0513824	.0731101	.2669825	.3798791	.0944539	.0905952	.5367160	.5109031
-.59337	.17555	.04864	.05496	-.15803	.76367	.0308178	.0549608	.1525036	.2719770	.1046232	.1064394	.5886123	.5915468
-.84079	.13623	.03744	.04172	-.12775	.97584	.0185584	.0417186	.0872454	.1961247	.1107317	.1184000	.6182726	.6494576
-1.08822	.10587	.02892	.03189	-.10231	1.19490	.0112094	.0318900	.0499233	.1420289	.1144144	.1275064	.6352423	.6912920
-1.33565	.08238	.02239	.02450	-.08141	1.41969	.0067860	.0245034	.0285437	.1030683	.1166407	.1344831	.6449498	.7216139
-1.58308	.06415	.01737	.01890	-.06447	1.64915	.0041154	.0189008	.0162923	.0748255	.1179894	.1398528	.6504966	.7436219
-1.83051	.04999	.01350	.01462	-.05087	1.88237	.0024995	.0146224	.0092765	.0542697	.1188077	.1440001	.6536598	.7595928
-2.07793	.03899	.01050	.01134	-.04004	2.11860	.0015199	.0113386	.0052651	.0392767	.1193050	.1472118	.6554588	.7711658
-2.32536	.03042	.00817	.00881	-.03144	2.35723	.0009254	.0088088	.0029767	.0283342	.1196075	.1497044	.6564784	.7795302
-2.57279	.02375	.00636	.00685	-.02464	2.59775	.0005642	.0068549	.0016753	.0203530	.1197918	.1516422	.6570540	.7855535
-2.82022	.01856	.00495	.00534	-.01928	2.83977	.0003446	.0053429	.0009379	.0145418	.1199042	.1531512	.6573773	.7898705
-3.06765	.01453	.00385	.00417	-.01506	3.08297	.0002110	.0041720	.0005221	.0103226	.1199730	.1543283	.6575579	.7929466
-3.31507	.01139	.00299	.00327	-.01173	3.32710	.0001297	.0032651	.0002888	.0072710	.1200151	.1552484	.6576582	.7951232
-3.56250	.00895	.00231	.00256	-.00911	3.57197	.0000802	.0025638	.0001587	.0050748	.1200411	.1559695	.6577135	.7966505
-3.80993	.00707	.00178	.00202	-.00703	3.81741	.0000500	.0020229	.0000866	.0035037	.1200572	.1565370	.6577439	.7977118
-4.05736	.00563	.00136	.00161	-.00538	4.06331	.0000317	.0016083	.0000470	.0023876	.1200673	.1569862	.6577604	.7984406
-4.30479	.00453	.00103	.00129	-.00406	4.30957	.0000205	.0012937	.0000254	.0016005	.1200737	.1573452	.6577694	.7989340
-4.55222	.00371	.00075	.00106	-.00299	4.55614	.0000138	.0010595	.0000136	.0010486	.1200780	.1576363	.6577742	.7992617
-4.79964	.00312	.00053	.00089	-.00209	4.80294	.0000098	.0008908	.0000072	.0006613	.1200809	.1578775	.6577768	.7994733
-5.04707	.00273	.00034	.00078	-.00133	5.04995	.0000074	.0007774	.0000037	.0003847	.1200830	.1580840	.6577782	.7996027
-5.29450	.00250	.00016	.00071	-.00064	5.29713	.0000062	.0007120	.0000015	.0001762	.1200847	.1582683	.6577788	.7996721
-5.54193	.00242	.00000	.00069	.00000	5.54448	.0000059	.0006907	.0000000	.0000000	.1200862	.1584418	.6577790	.7996939

LUTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .1280, WAVE HEIGHT=2.03758E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30792	.39094	.25259	.30209	-.19489	.00000	.1528370	.3020858	.8940734	1.7671570	.0000000	.0000000	.0000000	.0000000
.06418	.30447	.19071	.22326	-.19617	.19545	.0927038	.2232572	.5197074	1.2516037	.0299245	.0640245	.1723001	.3679020
-.17956	.23726	.14547	.16703	-.17740	.39344	.0562932	.1670251	.3018645	.8956494	.0480831	.1115890	.2724267	.6295918
-.42331	.18505	.11175	.12627	-.15232	.59696	.0342445	.1262653	.1752847	.6463041	.0591171	.1473329	.3305777	.8175126
-.66705	.14446	.08628	.09625	-.12701	.80669	.0208691	.0962452	.1017341	.4691832	.0658339	.1744506	.3643385	.9534591
-.91080	.11286	.06686	.07383	-.10399	1.02234	.0127380	.0738334	.0589912	.3419322	.0699296	.1951784	.3839264	1.0523113
-1.15454	.08823	.05195	.05692	-.08414	1.24322	.0077853	.0569195	.0341573	.2497278	.0724308	.2111135	.3952786	1.1244180
-1.39828	.06902	.04044	.04405	-.06751	1.46855	.0047637	.0440464	.0197389	.1825124	.0739602	.2234184	.4018470	1.1770959
-1.64203	.05401	.03153	.03418	-.05385	1.69756	.0029176	.0341846	.0113782	.1333165	.0748963	.2329526	.4056393	1.2155866
-1.88577	.04229	.02461	.02659	-.04276	1.92958	.0017884	.0265920	.0065388	.0972244	.0754659	.2403595	.4078229	1.2436830
-2.12951	.03312	.01922	.02072	-.03384	2.16402	.0010972	.0207241	.0037441	.0707193	.0758215	.2461290	.4090761	1.2641506
-2.37326	.02596	.01502	.01618	-.02671	2.40042	.0006738	.0161765	.0021350	.0512579	.0760374	.2506232	.4097926	1.2790162
-2.61700	.02035	.01173	.01264	-.02104	2.63837	.0004142	.0126449	.0012116	.0369854	.0761700	.2541357	.4102005	1.2897706
-2.86075	.01597	.00917	.00990	-.01654	2.87756	.0002551	.0098989	.0006840	.0265407	.0762515	.2568831	.4104315	1.2975127
-3.10449	.01255	.00715	.00776	-.01297	3.11772	.0001575	.0077626	.0003838	.0189208	.0763018	.2590356	.4105616	1.3030531
-3.34823	.00988	.00558	.00610	-.01014	3.35866	.0000976	.0061012	.0002141	.0133842	.0763329	.2607252	.4106345	1.3069902
-3.59198	.00780	.00433	.00481	-.00790	3.60022	.0000608	.0048112	.0001186	.0093815	.0763522	.2620551	.4106750	1.3097647
-3.83572	.00619	.00335	.00381	-.00612	3.84226	.0000383	.0038128	.0000653	.0065054	.0763643	.2631061	.4106974	1.3117009
-4.07946	.00495	.00257	.00304	-.00470	4.08469	.0000245	.0030448	.0000358	.0044529	.0763719	.2639419	.4107098	1.3130354
-4.32321	.00400	.00194	.00246	-.00356	4.32743	.0000160	.0024603	.0000195	.0029985	.0763769	.2646128	.4107165	1.3139445
-4.56695	.00329	.00143	.00202	-.00262	4.57042	.0000108	.0020239	.0000106	.0019733	.0763801	.2651593	.4107202	1.3145504
-4.81070	.00278	.00100	.00171	-.00184	4.81363	.0000077	.0017091	.0000057	.0012498	.0763824	.2656142	.4107221	1.3149432
-5.05444	.00244	.00064	.00150	-.00117	5.05701	.0000059	.0014969	.0000029	.0007297	.0763841	.2660050	.4107232	1.3151844
-5.29818	.00224	.00031	.00137	-.00057	5.30054	.0000050	.0013745	.0000012	.0003350	.0763854	.2663549	.4107237	1.3153142
-5.54193	.00217	.00000	.00133	.00000	5.54421	.0000047	.0013345	.0000000	.0000000	.0763866	.2666850	.4107238	1.3153550

WATER SURFACE ELEVATION

d=.1280 HEIGHT=2.0376E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

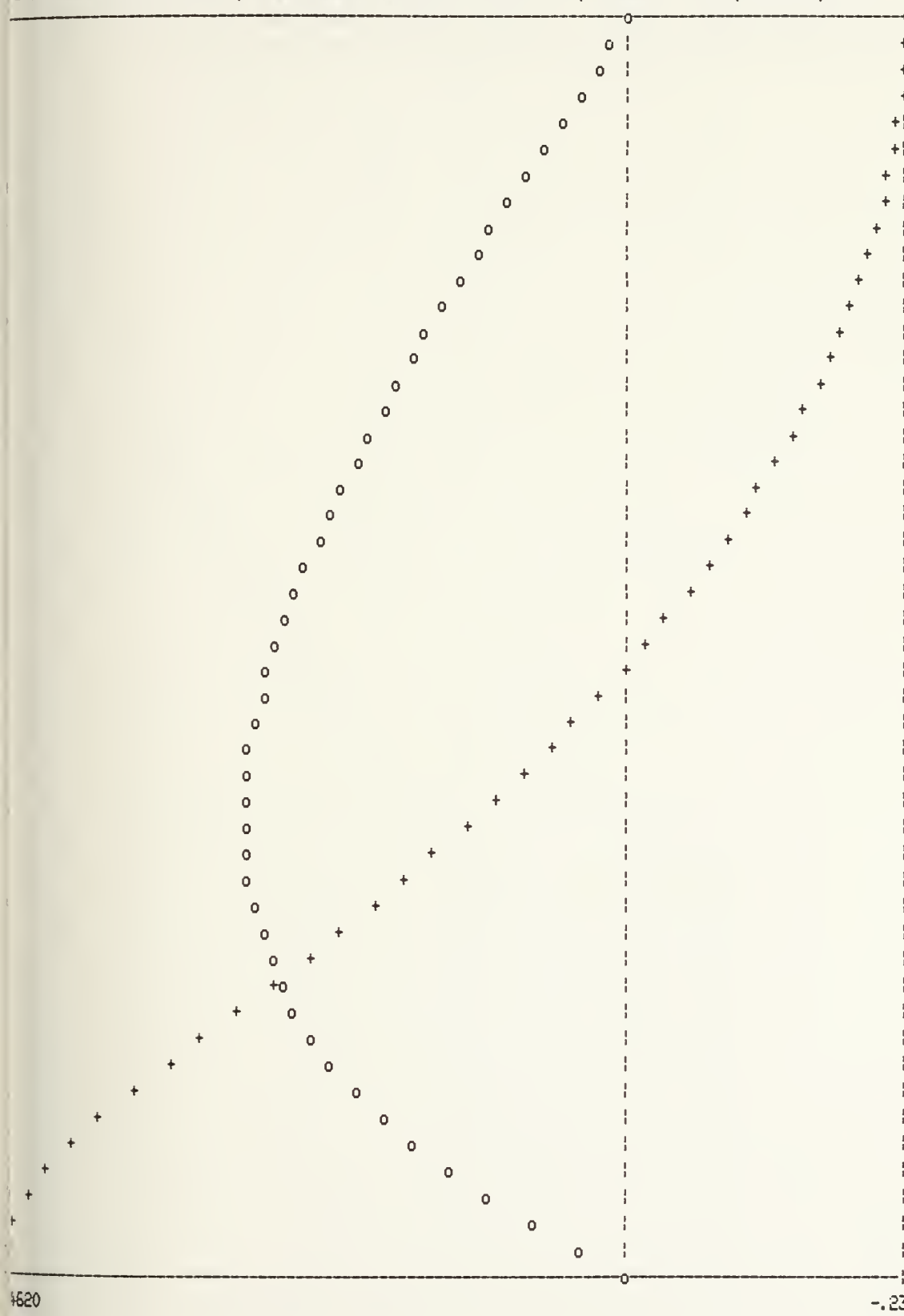


239 -.27712

ELEV.VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.27712	2.95046	3.14159	180.00
-.27676	2.88900	3.07614	176.25
-.27569	2.82753	3.01069	172.50
-.27388	2.76606	2.94524	168.75
-.27132	2.70459	2.87979	165.00
-.26798	2.64312	2.81434	161.25
-.26384	2.58166	2.74889	157.50
-.25889	2.52019	2.68344	153.75
-.25314	2.45872	2.61799	150.00
-.24659	2.39725	2.55254	146.25
-.23927	2.33578	2.48709	142.50
-.23123	2.27432	2.42164	138.75
-.22249	2.21285	2.35619	135.00
-.21308	2.15138	2.29074	131.25
-.20302	2.08991	2.22529	127.50
-.19230	2.02844	2.15984	123.75
-.18090	1.96698	2.09440	120.00
-.16878	1.90551	2.02895	116.25
-.15589	1.84404	1.96350	112.50
-.14217	1.78257	1.89805	108.75
-.12756	1.72110	1.83260	105.00
-.11203	1.65964	1.76715	101.25
-.09556	1.59817	1.70170	97.50
-.07817	1.53670	1.63625	93.75
-.05990	1.47523	1.57080	90.00
-.04083	1.41376	1.50535	86.25
-.02105	1.35230	1.43990	82.50
-.00065	1.29083	1.37445	78.75
.02027	1.22936	1.30900	75.00
.04166	1.16789	1.24355	71.25
.06346	1.10642	1.17810	67.50
.08569	1.04496	1.11265	63.75
.10838	.98349	1.04720	60.00
.13158	.92202	.98175	56.25
.15535	.86055	.91630	52.50
.17974	.79908	.85085	48.75
.20475	.73762	.78540	45.00
.23030	.67615	.71995	41.25
.25622	.61468	.65450	37.50
.28222	.55321	.58905	33.75
.30792	.49174	.52360	30.00
.33280	.43028	.45815	26.25
.35627	.36881	.39270	22.50
.37768	.30734	.32725	18.75
.39635	.24587	.26180	15.00
.41165	.18440	.19635	11.25
.42302	.12294	.13090	7.50
.43002	.06147	.06545	3.75
.43239	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

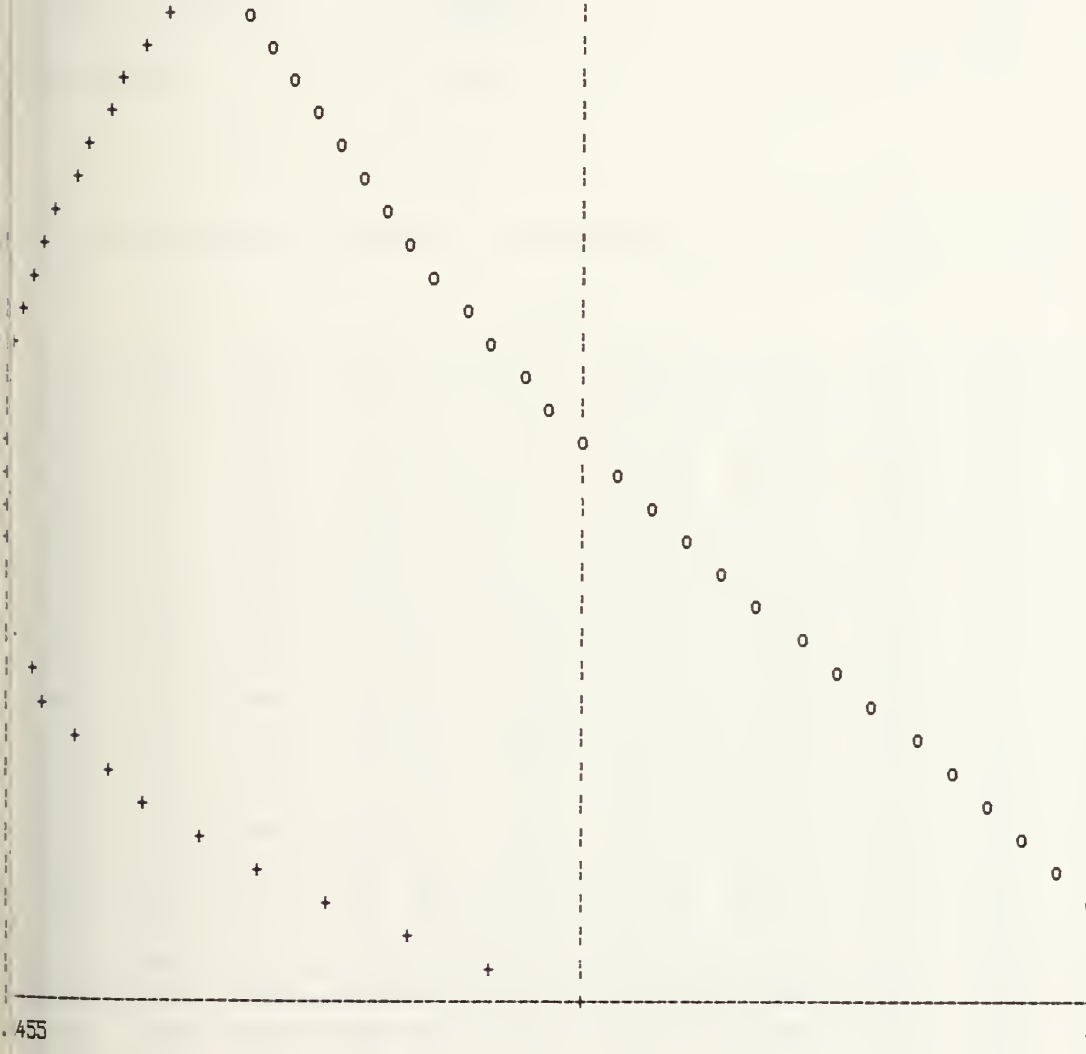
'd=.1280 HEIGHT=2.0376E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.23443	.00000	3.14159	180.00
-.23405	.01485	3.07614	176.25
-.23292	.02968	3.01069	172.50
-.23104	.04447	2.94524	168.75
-.22841	.05918	2.87979	165.00
-.22504	.07381	2.81434	161.25
-.22093	.08832	2.74889	157.50
-.21608	.10271	2.68344	153.75
-.21048	.11694	2.61799	150.00
-.20414	.13100	2.55254	146.25
-.19703	.14485	2.48709	142.50
-.18914	.15846	2.42164	138.75
-.18048	.17181	2.35619	135.00
-.17102	.18485	2.29074	131.25
-.16076	.19755	2.22529	127.50
-.14970	.20988	2.15984	123.75
-.13785	.22180	2.09440	120.00
-.12519	.23329	2.02895	116.25
-.11175	.24432	1.96350	112.50
-.09750	.25488	1.89805	108.75
-.08246	.26493	1.83260	105.00
-.06661	.27445	1.76715	101.25
-.04993	.28341	1.70170	97.50
-.03241	.29175	1.63625	93.75
-.01404	.29941	1.57080	90.00
.00521	.30633	1.50535	86.25
.02534	.31240	1.43990	82.50
.04636	.31754	1.37445	78.75
.06826	.32165	1.30900	75.00
.09102	.32461	1.24355	71.25
.11463	.32634	1.17810	67.50
.13907	.32674	1.11265	63.75
.16431	.32572	1.04720	60.00
.19033	.32321	.98175	56.25
.21713	.31911	.91630	52.50
.24468	.31331	.85085	48.75
.27295	.30567	.78540	45.00
.30187	.29602	.71995	41.25
.33133	.28414	.65450	37.50
.36113	.26976	.58905	33.75
.39094	.25259	.52360	30.00
.42031	.23231	.45815	26.25
.44861	.20866	.39270	22.50
.47505	.18145	.32725	18.75
.49870	.15066	.26180	15.00
.51854	.11651	.19635	11.25
.53359	.07947	.13090	7.50
.54300	.04030	.06545	3.75
.54620	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

d=.1280 HEIGHT=2.0376E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax *1/G	Ay *1/G	DIST. *K	ANGLE DEGREES
.00000	.29494	3.14159	180.00
.01481	.29462	3.07614	176.25
.02959	.29369	3.01069	172.50
.04434	.29214	2.94524	168.75
.05904	.28998	2.87979	165.00
.07366	.28722	2.81434	161.25
.08820	.28385	2.74889	157.50
.10263	.27990	2.68344	153.75
.11695	.27534	2.61799	150.00
.13113	.27019	2.55254	146.25
.14514	.26442	2.48709	142.50
.15897	.25802	2.42164	138.75
.17259	.25099	2.35619	135.00
.18596	.24332	2.29074	131.25
.19906	.23500	2.22529	127.50
.21186	.22603	2.15984	123.75
.22434	.21642	2.09440	120.00
.23647	.20619	2.02895	116.25
.24825	.19534	1.96350	112.50
.25965	.18390	1.89805	108.75
.27067	.17187	1.83260	105.00
.28127	.15925	1.76715	101.25
.29144	.14605	1.70170	97.50
.30112	.13226	1.63625	93.75
.31028	.11786	1.57080	90.00
.31883	.10284	1.50535	86.25
.32670	.08717	1.43990	82.50
.33380	.07085	1.37445	78.75
.34002	.05386	1.30900	75.00
.34527	.03621	1.24355	71.25
.34944	.01791	1.17810	67.50
.35245	-.00103	1.11265	63.75
.35418	-.02058	1.04720	60.00
.35455	-.04071	.98175	56.25
.35343	-.06139	.91630	52.50
.35066	-.08259	.85085	48.75
.34605	-.10429	.78540	45.00
.33930	-.12644	.71995	41.25
.33006	-.14900	.65450	37.50
.31785	-.17187	.58905	33.75
.30209	-.19489	.52360	30.00
.28213	-.21779	.45815	26.25
.25731	-.24016	.39270	22.50
.22708	-.26141	.32725	18.75
.19112	-.28076	.26180	15.00
.14950	-.29729	.19635	11.25
.10288	-.31002	.13090	7.50
.05246	-.31807	.06545	3.75
.00000	-.32083	.00000	.00

PTH: FINITE, HEIGHT/DEPTH= .1280

VE HEIGHT 2.037581E-02, DIMENSIONLESS WITH RESPECT TO PERIOD

URRENT CRITERION: EULER , MAGNITUDE= .00

LUTION OF ORDER 8 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

ATER DEPTH	5.5421
AVE HEIGHT	.70952
AVE PERIOD	5.9010
AVE SPEED	1.0648
EAN EULERIAN FLUID SPEED	-1.04061E-22
EAN MASS TRANSPORT SPEED	1.02192E-02
EAN FLUID SPEED RELATIVE TO WAVE	1.0648
OLUME FLUX DUE TO WAVES	5.66355E-02
ERNOULLI CONSTANT	.56686

LUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .1280, WAVE HEIGHT=2.03758E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.43242	.54622	.00000	.00000	-.32106	.00000	.2983563	.0000000	1.7825211	.0000000	.0000000	.0000000	.0000000	.0000000
.18348	.41432	.00000	.00000	-.29392	.17184	.1716605	.0000000	.9828481	.0000000	.0585021	.0000000	.3442004	.0000000
-.06545	.31693	.00000	.00000	-.25218	.35269	.1004474	.0000000	.5501100	.0000000	.0923709	.0000000	.5350049	.0000000
-.31439	.24375	.00000	.00000	-.20941	.54422	.0594158	.0000000	.3106056	.0000000	.1122688	.0000000	.6421366	.0000000
-.56333	.18816	.00000	.00000	-.17059	.74597	.0354027	.0000000	.1762602	.0000000	.1240706	.0000000	.7027359	.0000000
-.81226	.14561	.00000	.00000	-.13726	.95670	.0212030	.0000000	.1002856	.0000000	.1311162	.0000000	.7371570	.0000000
-1.06120	.11290	.00000	.00000	-.10953	1.17304	.0127458	.0000000	.0571122	.0000000	.1353418	.0000000	.7567480	.0000000
-1.31014	.08765	.00000	.00000	-.08688	1.39962	.0076831	.0000000	.0325142	.0000000	.1378845	.0000000	.7679037	.0000000
-1.55907	.06813	.00000	.00000	-.06862	1.62929	.0046411	.0000000	.0184853	.0000000	.1394185	.0000000	.7742515	.0000000
-1.80801	.05299	.00000	.00000	-.05402	1.86303	.0028082	.0000000	.0104860	.0000000	.1403457	.0000000	.7778575	.0000000
-2.05695	.04125	.00000	.00000	-.04243	2.10002	.0017016	.0000000	.0059304	.0000000	.1409070	.0000000	.7799008	.0000000
-2.30588	.03213	.00000	.00000	-.03325	2.33958	.0010325	.0000000	.0033413	.0000000	.1412473	.0000000	.7810548	.0000000
-2.55482	.02505	.00000	.00000	-.02602	2.58117	.0006274	.0000000	.0018741	.0000000	.1414539	.0000000	.7817040	.0000000
-2.80375	.01954	.00000	.00000	-.02032	2.82437	.0003819	.0000000	.0010458	.0000000	.1415796	.0000000	.7820674	.0000000
-3.05269	.01527	.00000	.00000	-.01584	3.06883	.0002331	.0000000	.0005802	.0000000	.1416561	.0000000	.7822698	.0000000
-3.30163	.01195	.00000	.00000	-.01232	3.31428	.0001428	.0000000	.0003198	.0000000	.1417029	.0000000	.7823818	.0000000
-3.55056	.00938	.00000	.00000	-.00955	3.56050	.0000880	.0000000	.0001752	.0000000	.1417316	.0000000	.7824434	.0000000
-3.79950	.00740	.00000	.00000	-.00736	3.80735	.0000547	.0000000	.0000953	.0000000	.1417493	.0000000	.7824771	.0000000
-4.04844	.00587	.00000	.00000	-.00563	4.05467	.0000345	.0000000	.0000516	.0000000	.1417605	.0000000	.7824954	.0000000
-4.29737	.00472	.00000	.00000	-.00424	4.30239	.0000223	.0000000	.0000277	.0000000	.1417675	.0000000	.7825052	.0000000
-4.54631	.00386	.00000	.00000	-.00312	4.55041	.0000149	.0000000	.0000149	.0000000	.1417722	.0000000	.7825105	.0000000
-4.79524	.00324	.00000	.00000	-.00218	4.79869	.0000105	.0000000	.0000079	.0000000	.1417753	.0000000	.7825134	.0000000
-5.04418	.00283	.00000	.00000	-.00138	5.04719	.0000080	.0000000	.0000040	.0000000	.1417776	.0000000	.7825148	.0000000
-5.29312	.00259	.00000	.00000	-.00067	5.29587	.0000067	.0000000	.0000017	.0000000	.1417795	.0000000	.7825155	.0000000
-5.54205	.00251	.00000	.00000	.00000	5.54472	.0000063	.0000000	.0000000	.0000000	.1417811	.0000000	.7825157	.0000000

UTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .1280, WAVE HEIGHT=2.03758E-02 DIMENSIONLESS W/RESP. TO PERIOD

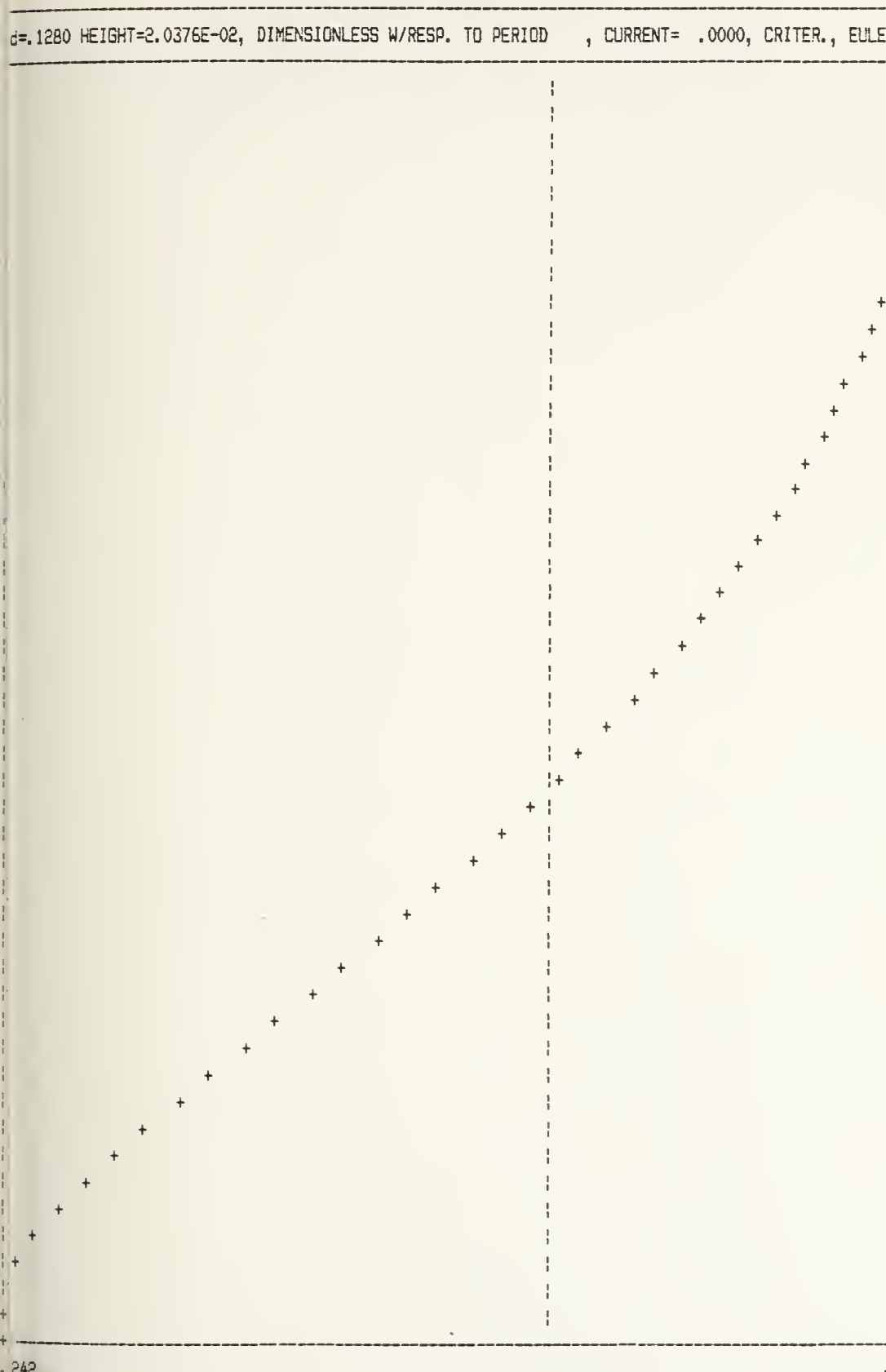
KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.39518	.49797	.15044	.19094	-.28051	-.00026	.2479692	.1909354	1.4722509	1.1336276	.0000000	.0000000	.0000000	.0000000
.14779	.38102	.11108	.13522	-.26401	.17915	.1451797	.1352249	.8260507	.7694090	.0486295	.0403435	.2842823	.2353911
-.09959	.29316	.08348	.09841	-.22987	.36528	.0859422	.0984094	.4677371	.5355897	.0772175	.0692423	.4443140	.3968094
-.34698	.22643	.06345	.07300	-.19262	.56042	.0512693	.0730016	.2663479	.3792491	.0941895	.0904445	.5351147	.5099680
-.59436	.17537	.04859	.05489	-.15789	.76453	.0307540	.0548891	.1521616	.2715747	.1043352	.1062636	.5868811	.5904699
-.84174	.13610	.03740	.04167	-.12764	.97669	.0185222	.0416700	.0870601	.1958620	.1104303	.1182073	.6164710	.6482882
-1.08913	.10578	.02889	.03186	-.10222	1.19574	.0111888	.0318564	.0498227	.1418540	.1141053	.1273019	.6334023	.6900611
-1.33651	.08231	.02237	.02448	-.08134	1.42051	.0067742	.0244797	.0284891	.1029504	.1163272	.1342703	.6430889	.7203416
-1.58390	.06410	.01736	.01888	-.06441	1.64994	.0041087	.0188839	.0162628	.0747455	.1176733	.1396340	.6486244	.7423212
-1.83128	.04996	.01349	.01461	-.05083	1.88313	.0024956	.0146102	.0092606	.0542152	.1184902	.1437770	.6517814	.7582726
-2.07867	.03896	.01049	.01133	-.04001	2.11933	.0015177	.0113298	.0052565	.0392396	.1189866	.1469856	.6535771	.7698323
-2.32605	.03040	.00816	.00880	-.03142	2.35793	.0009242	.0088026	.0029721	.0283090	.1192887	.1494758	.6545949	.7781875
-2.57344	.02374	.00635	.00685	-.02463	2.59841	.0005635	.0068503	.0016729	.0203360	.1194727	.1514119	.6551695	.7842045
-2.82082	.01855	.00494	.00534	-.01927	2.84039	.0003442	.0053396	.0009367	.0145304	.1195850	.1529197	.6554922	.7885172
-3.06821	.01452	.00384	.00417	-.01505	3.08355	.0002108	.0041696	.0005214	.0103150	.1196536	.1540960	.6556726	.7915904
-3.31559	.01138	.00299	.00326	-.01172	3.32764	.0001295	.0032635	.0002884	.0072660	.1196957	.1550154	.6557728	.7937651
-3.56298	.00895	.00231	.00256	-.00910	3.57246	.0000801	.0025626	.0001585	.0050716	.1197216	.1557360	.6558281	.7952911
-3.81036	.00707	.00178	.00202	-.00703	3.81786	.0000500	.0020221	.0000866	.0035017	.1197377	.1563031	.6558584	.7963516
-4.05775	.00563	.00136	.00161	-.00538	4.06372	.0000317	.0016077	.0000470	.0023864	.1197478	.1567521	.6558749	.7970799
-4.30513	.00453	.00103	.00129	-.00406	4.30994	.0000205	.0012933	.0000254	.0015997	.1197543	.1571109	.6558838	.7975729
-4.55252	.00371	.00075	.00106	-.00298	4.55646	.0000138	.0010592	.0000136	.0010481	.1197585	.1574019	.6558887	.7979004
-4.79990	.00312	.00053	.00089	-.00209	4.80322	.0000098	.0008907	.0000072	.0006610	.1197614	.1576431	.6558913	.7981118
-5.04728	.00273	.00033	.00078	-.00133	5.05018	.0000074	.0007773	.0000037	.0003846	.1197636	.1578494	.6558926	.7982412
-5.29467	.00250	.00016	.00071	-.00064	5.29733	.0000062	.0007119	.0000015	.0001761	.1197653	.1580336	.6558932	.7983105
-5.54205	.00242	.00000	.00069	.00000	5.54463	.0000059	.0006906	.0000000	.0000000	.1197668	.1582071	.6558934	.7983323

TION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .1280, WAVE HEIGHT=2.03758E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30746	.39074	.25235	.30151	-.19494	.00040	.1526775	.3015069	.8930897	1.7636699	.0000000	.0000000	.0000000	.0000000
.06373	.30433	.19057	.22301	-.19617	.19584	.0926190	.2230107	.5192022	1.2501509	.0298930	.0639203	.1721089	.3672791
-.18000	.23716	.14538	.16689	-.17736	.39382	.0562442	.1668912	.3015848	.8948802	.0480342	.1114357	.2721341	.6286833
-.42373	.18498	.11169	.12618	-.15227	.59733	.0342159	.1261828	.1751282	.6458448	.0590582	.1471511	.3302287	.8164437
-.66746	.14440	.08624	.09619	-.12696	.80707	.0208523	.0961909	.1016466	.4688919	.0657690	.1742507	.3639578	.9522910
-.91119	.11282	.06683	.07380	-.10396	1.02271	.0127282	.0737963	.0589425	.3417411	.0698613	.1949662	.3835280	1.0510788
1.15492	.08820	.05193	.05689	-.08411	1.24359	.0077796	.0568935	.0341302	.2495999	.0723605	.2108927	.3948703	1.1231425
1.39865	.06899	.04043	.04403	-.06749	1.46891	.0047603	.0440279	.0197239	.1824256	.0738887	.2231915	.4014333	1.1757913
1.64238	.05400	.03152	.03417	-.05383	1.69791	.0029156	.0341713	.0113699	.1332572	.0748241	.2327212	.4052225	1.2142520
1.88611	.04228	.02460	.02658	-.04275	1.92992	.0017873	.0265823	.0065342	.0971836	.0753972	.2401250	.4074044	1.2423446
2.12984	.03311	.01921	.02072	-.03383	2.16436	.0010965	.0207171	.0037416	.0706912	.0757487	.2458891	.4086566	1.2628027
2.37356	.02595	.01501	.01617	-.02671	2.40074	.0006734	.0161713	.0021336	.0512386	.0759644	.2503845	.4093726	1.2776616
2.61729	.02035	.01173	.01264	-.02104	2.63868	.0004140	.0126411	.0012109	.0369722	.0760969	.2538957	.4097802	1.2884114
2.86102	.01597	.00916	.00990	-.01653	2.87786	.0002550	.0098961	.0006836	.0265317	.0761784	.2566422	.4100111	1.2961503
3.10475	.01255	.00715	.00776	-.01297	3.11801	.0001574	.0077605	.0003836	.0189147	.0762286	.2587940	.4101411	1.3016887
3.34848	.00988	.00557	.00610	-.01014	3.35893	.0000975	.0060997	.0002140	.0133801	.0762597	.2604830	.4102139	1.3056243
3.59221	.00780	.00433	.00481	-.00790	3.60048	.0000608	.0048101	.0001186	.0093788	.0762790	.2618125	.4102545	1.3083978
3.83594	.00619	.00335	.00381	-.00612	3.84251	.0000383	.0038120	.0000653	.0065036	.0762911	.2628633	.4102769	1.3103333
4.07967	.00494	.00257	.00304	-.00470	4.08492	.0000245	.0030442	.0000358	.0044518	.0762987	.2636988	.4102892	1.3116684
4.32340	.00400	.00194	.00246	-.00356	4.32765	.0000160	.0024599	.0000195	.0029977	.0763037	.2643695	.4102959	1.3125762
4.56713	.00329	.00143	.00202	-.00262	4.57063	.0000108	.0020236	.0000106	.0019728	.0763069	.2649159	.4102996	1.3131820
4.81086	.00278	.00100	.00171	-.00184	4.81382	.0000077	.0017089	.0000057	.0012495	.0763092	.2653708	.4103015	1.3135746
5.05459	.00244	.00064	.00150	-.00117	5.05718	.0000059	.0014967	.0000029	.0007296	.0763109	.2657614	.4103026	1.3138158
5.29832	.00224	.00031	.00137	-.00057	5.30070	.0000050	.0013743	.0000012	.0003350	.0763122	.2661113	.4103031	1.3139456
5.54205	.00217	.00000	.00133	.00000	5.54436	.0000047	.0013343	.0000000	.0000000	.0763134	.2664414	.4103032	1.3139864

WATER SURFACE ELEVATION

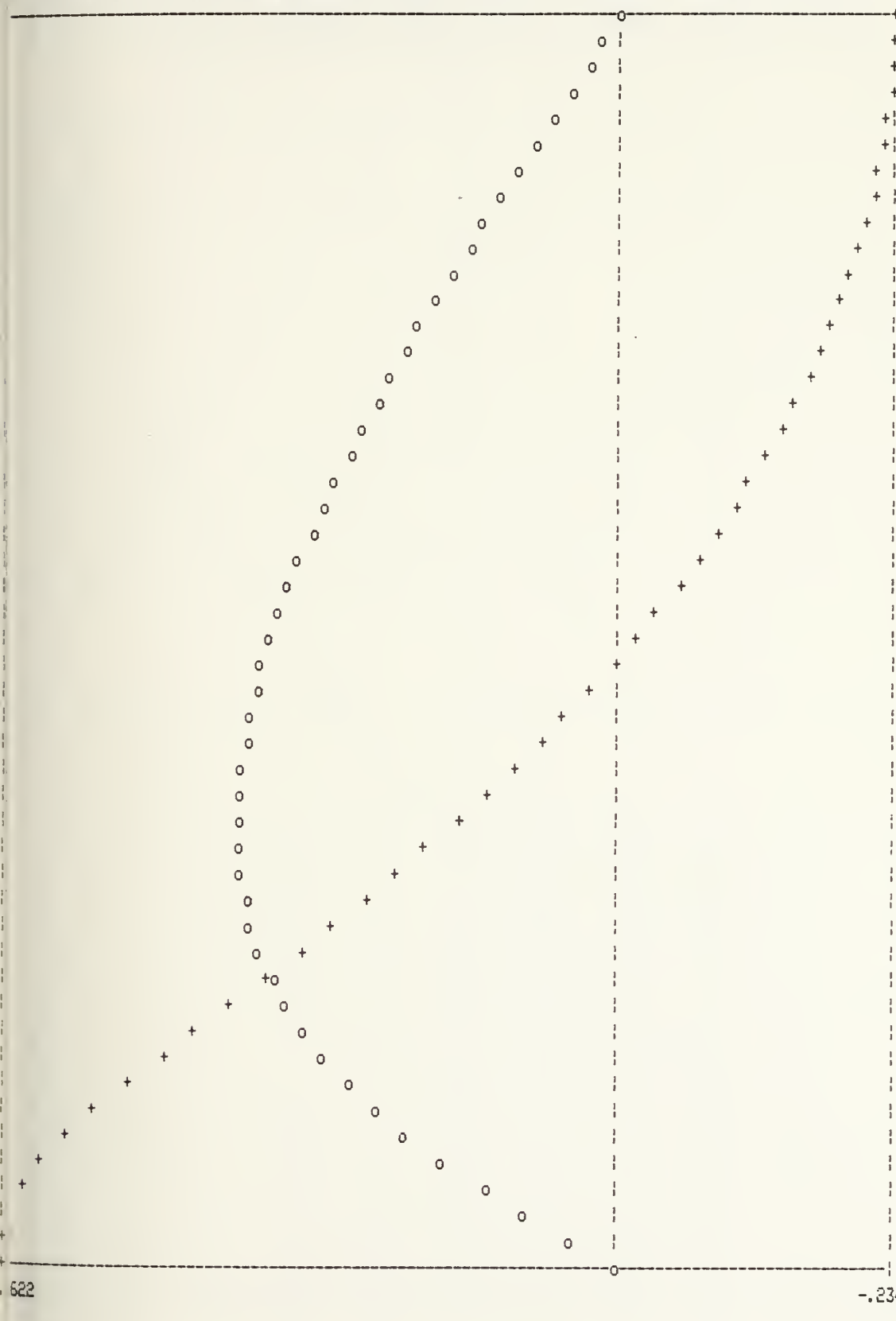
d=.1280 HEIGHT=2.0376E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



ELEV. VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.27710	2.95050	3.14159	180.00
-.27674	2.88903	3.07614	176.25
-.27563	2.82756	3.01069	172.50
-.27377	2.76609	2.94524	168.75
-.27116	2.70462	2.87979	165.00
-.26777	2.64315	2.81434	161.25
-.26362	2.58169	2.74889	157.50
-.25871	2.52022	2.68344	153.75
-.25304	2.45875	2.61799	150.00
-.24663	2.39728	2.55254	146.25
-.23950	2.33581	2.48709	142.50
-.23165	2.27434	2.42164	138.75
-.22307	2.21287	2.35619	135.00
-.21375	2.15140	2.29074	131.25
-.20365	2.08994	2.22529	127.50
-.19276	2.02847	2.15984	123.75
-.18106	1.96700	2.09440	120.00
-.16854	1.90553	2.02895	116.25
-.15521	1.84406	1.96350	112.50
-.14110	1.78259	1.89805	108.75
-.12625	1.72112	1.83260	105.00
-.11068	1.65966	1.76715	101.25
-.09443	1.59819	1.70170	97.50
-.07750	1.53672	1.63625	93.75
-.05987	1.47525	1.57080	90.00
-.04151	1.41378	1.50535	86.25
-.02237	1.35231	1.43990	82.50
-.00242	1.29084	1.37445	78.75
.01835	1.22937	1.30900	75.00
.03993	1.16791	1.24355	71.25
.06227	1.10644	1.17810	67.50
.08527	1.04497	1.11265	63.75
.10885	.98350	1.04720	60.00
.13289	.92203	.98175	56.25
.15729	.86056	.91630	52.50
.18200	.79909	.85085	48.75
.20694	.73762	.78540	45.00
.23208	.67616	.71995	41.25
.25732	.61469	.65450	37.50
.28253	.55322	.58905	33.75
.30746	.49175	.52360	30.00
.33176	.43028	.45815	26.25
.35491	.36881	.39270	22.50
.37628	.30734	.32725	18.75
.39518	.24587	.26180	15.00
.41086	.18441	.19635	11.25
.42263	.12294	.13090	7.50
.42994	.06147	.06545	3.75
.43242	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

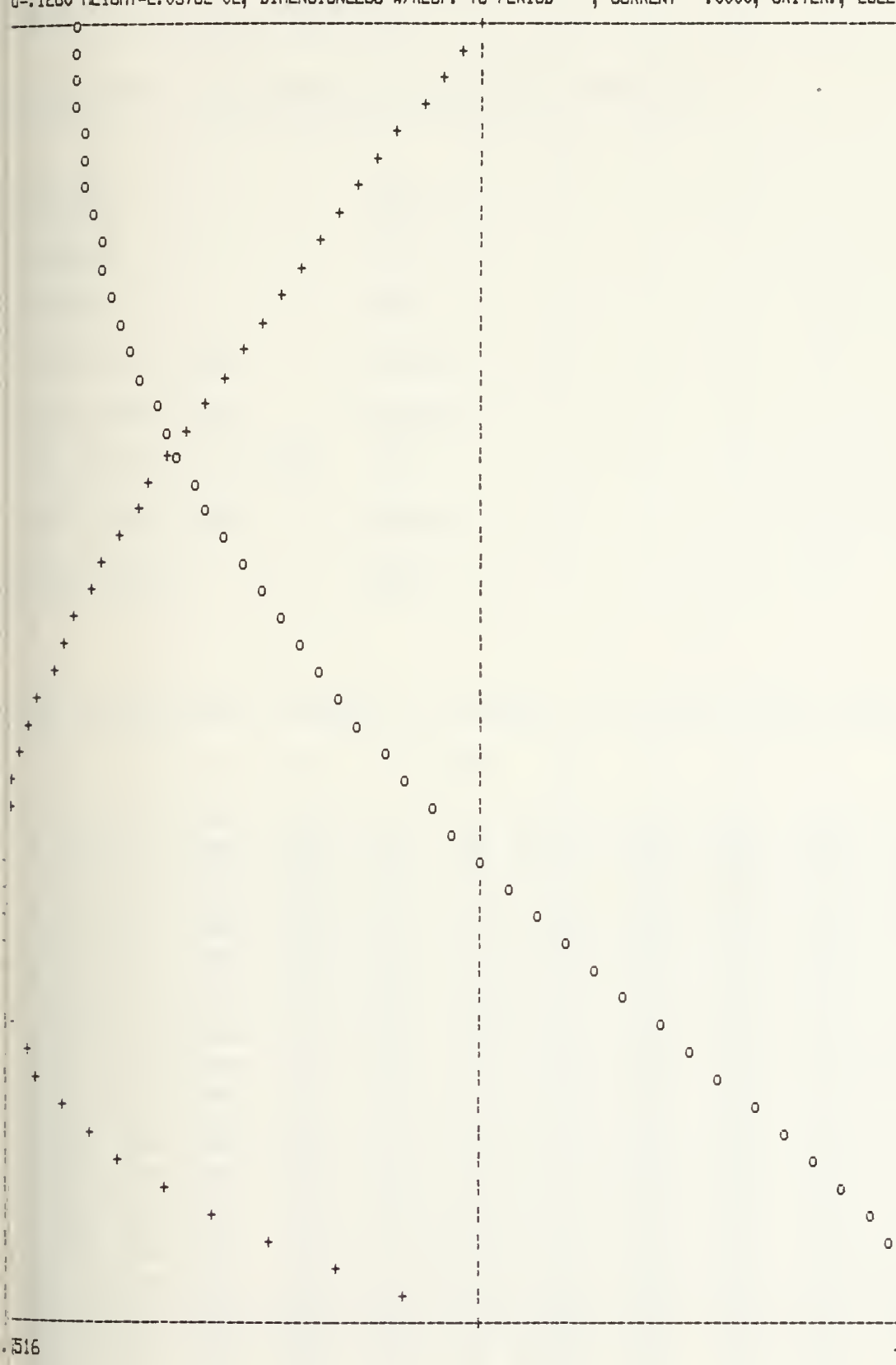
d=.1280 HEIGHT=2.0376E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



U	V	DIST.	ANGLE
	*SQRT(K/G)	*K	DEGREES
-.23444	.00000	3.14159	180.00
-.23406	.01486	3.07614	176.25
-.23294	.02969	3.01069	172.50
-.23107	.04448	2.94524	168.75
-.22846	.05920	2.87979	165.00
-.22509	.07383	2.81434	161.25
-.22099	.08835	2.74889	157.50
-.21613	.10273	2.68344	153.75
-.21051	.11696	2.61799	150.00
-.20414	.13100	2.55254	146.25
-.19699	.14482	2.48709	142.50
-.18907	.15841	2.42164	138.75
-.18038	.17172	2.35619	135.00
-.17091	.18474	2.29074	131.25
-.16066	.19744	2.22529	127.50
-.14963	.20980	2.15984	123.75
-.13782	.22178	2.09440	120.00
-.12522	.23336	2.02895	116.25
-.11182	.24450	1.96350	112.50
-.09761	.25515	1.89805	108.75
-.08257	.26528	1.83260	105.00
-.06670	.27482	1.76715	101.25
-.04999	.28373	1.70170	97.50
-.03244	.29195	1.63625	93.75
-.01403	.29943	1.57080	90.00
.00522	.30613	1.50535	86.25
.02533	.31200	1.43990	82.50
.04631	.31699	1.37445	78.75
.06817	.32103	1.30900	75.00
.09090	.32405	1.24355	71.25
.11453	.32595	1.17810	67.50
.13904	.32661	1.11265	63.75
.16441	.32590	1.04720	60.00
.19060	.32367	.98175	56.25
.21757	.31977	.91630	52.50
.24526	.31406	.85085	48.75
.27358	.30637	.78540	45.00
.30245	.29655	.71995	41.25
.33174	.28442	.65450	37.50
.36125	.26976	.58905	33.75
.39074	.25235	.52360	30.00
.41980	.23192	.45815	26.25
.44788	.20824	.39270	22.50
.47424	.18110	.32725	18.75
.49797	.15044	.26180	15.00
.51801	.11642	.19635	11.25
.53332	.07947	.13090	7.50
.54294	.04032	.06545	3.75
.54622	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

d=.1280 HEIGHT=2.0376E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax *1/G	Ay *1/G	DIST. *K	ANGLE DEGREES
.00000	.29496	3.14159	180.00
.01481	.29465	3.07614	176.25
.02960	.29373	3.01069	172.50
.04435	.29219	2.94524	168.75
.05905	.29005	2.87979	165.00
.07368	.28730	2.81434	161.25
.08822	.28394	2.74889	157.50
.10266	.27997	2.68344	153.75
.11697	.27539	2.61799	150.00
.13113	.27019	2.55254	146.25
.14512	.26436	2.48709	142.50
.15892	.25791	2.42164	138.75
.17251	.25083	2.35619	135.00
.18586	.24314	2.29074	131.25
.19896	.23483	2.22529	127.50
.21179	.22591	2.15984	123.75
.22433	.21639	2.09440	120.00
.23655	.20626	2.02895	116.25
.24843	.19552	1.96350	112.50
.25993	.18417	1.89805	108.75
.27101	.17219	1.83260	105.00
.28163	.15956	1.76715	101.25
.29174	.14630	1.70170	97.50
.30130	.13240	1.63625	93.75
.31027	.11786	1.57080	90.00
.31861	.10269	1.50535	86.25
.32628	.08691	1.43990	82.50
.33323	.07052	1.37445	78.75
.33941	.05353	1.30900	75.00
.34473	.03594	1.24355	71.25
.34911	.01773	1.17810	67.50
.35241	-.00109	1.11265	63.75
.35449	-.02053	1.04720	60.00
.35516	-.04059	.98175	56.25
.35426	-.06126	.91630	52.50
.35156	-.08250	.85085	48.75
.34684	-.10427	.78540	45.00
.33983	-.12651	.71995	41.25
.33021	-.14912	.65450	37.50
.31760	-.17199	.58905	33.75
.30151	-.19494	.52360	30.00
.28138	-.21773	.45815	26.25
.25660	-.23998	.39270	22.50
.22659	-.26115	.32725	18.75
.19094	-.28051	.26180	15.00
.14961	-.29714	.19635	11.25
.10312	-.31004	.13090	7.50
.05265	-.31824	.06545	3.75
.00000	-.32106	.00000	.00

STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
M. M. RIENECKER AND J. D. FENTON.

DEPTH: DEEP , HEIGHT/DEPTH= .1280

WAVE HEIGHT 2.037581E-02,DIMENSIONLESS WITH RESPECT TO PERIOD

CURRENT CRITERION: EULER , MAGNITUDE= .00

SOLUTION OF ORDER 6 NON-DIMENSIONALIZED BY WAVE NUMBER, 2 HEIGHT STEP(S).

WAVE HEIGHT	.70949
WAVE PERIOD	5.9009
WAVE SPEED	1.0648
MEAN EULERIAN FLUID SPEED	-3.48686E-23
MEAN MASS TRANSPORT SPEED	-2.88340E-20
MEAN FLUID SPEED RELATIVE TO WAVE	1.0648
VOLUME FLUX DUE TO WAVES	5.66610E-02
BERNOULLI CONSTANT	.56686

SOLUTION VS DEPTH, THETA= .00 DEGREES, KX= .0000 RADIANS, H/d= .1280, WAVE HEIGHT=2.03758E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.43237	.54616	.00000	.00000	-.32082	.00000	.2982872	.0000000	1.0660673	.0000000	.0000000	.0000000	.0000000	.0000000
.28345	.46238	.00000	.00000	-.30781	.10196	.2137991	.0000000	.7322720	.0000000	.0381287	.0000000	.1338999	.0000000
.13454	.39286	.00000	.00000	-.28626	.20657	.1543354	.0000000	.5056232	.0000000	.0655391	.0000000	.2260705	.0000000
-.01438	.33468	.00000	.00000	-.26113	.31471	.1120116	.0000000	.3502844	.0000000	.0853706	.0000000	.2897993	.0000000
-.16329	.28571	.00000	.00000	-.23514	.42667	.0816326	.0000000	.2431266	.0000000	.0997889	.0000000	.3339832	.0000000
-.31221	.24431	.00000	.00000	-.20980	.54247	.0596871	.0000000	.1688778	.0000000	.1103112	.0000000	.3646601	.0000000
-.46112	.20918	.00000	.00000	-.18593	.66194	.0437546	.0000000	.1172831	.0000000	.1180132	.0000000	.3859669	.0000000
-.61004	.17928	.00000	.00000	-.16392	.78483	.0321423	.0000000	.0813700	.0000000	.1236643	.0000000	.4007581	.0000000
-.75895	.15379	.00000	.00000	-.14394	.91085	.0236520	.0000000	.0563543	.0000000	.1278186	.0000000	.4110127	.0000000
-.90787	.13202	.00000	.00000	-.12599	1.03970	.0174288	.0000000	.0389312	.0000000	.1308774	.0000000	.4181075	.0000000
-1.05678	.11339	.00000	.00000	-.10999	1.17106	.0128579	.0000000	.0268063	.0000000	.1331325	.0000000	.4230021	.0000000
-1.20570	.09744	.00000	.00000	-.09583	1.30468	.0094949	.0000000	.0183812	.0000000	.1347968	.0000000	.4263667	.0000000
-1.35461	.08377	.00000	.00000	-.08334	1.44027	.0070172	.0000000	.0125396	.0000000	.1360263	.0000000	.4286690	.0000000
-1.50353	.07204	.00000	.00000	-.07238	1.57761	.0051895	.0000000	.0085008	.0000000	.1369352	.0000000	.4302356	.0000000
-1.65244	.06197	.00000	.00000	-.06278	1.71648	.0038401	.0000000	.0057185	.0000000	.1376075	.0000000	.4312943	.0000000
-1.80136	.05332	.00000	.00000	-.05440	1.85668	.0028429	.0000000	.0038102	.0000000	.1381051	.0000000	.4320038	.0000000
-1.95027	.04589	.00000	.00000	-.04711	1.99805	.0021056	.0000000	.0025084	.0000000	.1384735	.0000000	.4324743	.0000000
-2.09919	.03950	.00000	.00000	-.04076	2.14043	.0015600	.0000000	.0016261	.0000000	.1387465	.0000000	.4327821	.0000000
-2.24810	.03400	.00000	.00000	-.03524	2.28370	.0011561	.0000000	.0010330	.0000000	.1389487	.0000000	.4329801	.0000000
-2.39702	.02927	.00000	.00000	-.03046	2.42773	.0008570	.0000000	.0006381	.0000000	.1390986	.0000000	.4331045	.0000000
-2.54593	.02521	.00000	.00000	-.02631	2.57243	.0006354	.0000000	.0003785	.0000000	.1392097	.0000000	.4331802	.0000000
-2.69485	.02171	.00000	.00000	-.02272	2.71770	.0004712	.0000000	.0002105	.0000000	.1392921	.0000000	.4332241	.0000000
-2.84376	.01870	.00000	.00000	-.01962	2.86347	.0003495	.0000000	.0001041	.0000000	.1393532	.0000000	.4332475	.0000000
-2.99268	.01610	.00000	.00000	-.01693	3.00966	.0002593	.0000000	.0000386	.0000000	.1393986	.0000000	.4332581	.0000000
-3.14159	.01387	.00000	.00000	-.01461	3.15624	.0001924	.0000000	.0000000	.0000000	.1394322	.0000000	.4332610	.0000000

SOLUTION VS DEPTH, THETA= 3.75 DEGREES, KX= .0654 RADIANS, H/d= .1280, WAVE HEIGHT=2.03758E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.43000	.54295	.04029	.05245	-.31806	-.00011	.2947988	.0524485	1.0529022	.1873248	.0000000	.0000000	.0000000	.0000000
.28119	.45987	.03330	.04201	-.30554	.10215	.2114774	.0420089	.7238404	.1437872	.0376711	.0070284	.1322043	.0246375
.13237	.39085	.02778	.03411	-.28439	.20700	.1527607	.0341086	.5001328	.1116703	.0647734	.0126922	.2232780	.0436456
-.01645	.33306	.02333	.02800	-.25958	.31532	.1109286	.0280019	.3466681	.0875099	.0843941	.0173137	.2862869	.0584662
-.16526	.28439	.01969	.02319	-.23385	.42742	.0808802	.0231930	.2407261	.0690299	.0986662	.0211230	.3299939	.0701141
-.31408	.24323	.01669	.01935	-.20873	.54332	.0591603	.0193463	.1672766	.0547020	.1090864	.0242883	.3603527	.0793208
-.46290	.20829	.01418	.01623	-.18503	.66286	.0433837	.0162293	.1162118	.0434734	.1167165	.0269354	.3814465	.0866258
-.61171	.17855	.01208	.01368	-.16317	.78579	.0318800	.0136768	.0806525	.0346006	.1223168	.0291607	.3960949	.0924352
-.76053	.15319	.01032	.01157	-.14331	.91182	.0234659	.0115684	.0558739	.0275450	.1264350	.0310391	.4062535	.0970593
-.90935	.13152	.00882	.00981	-.12547	1.04067	.0172965	.0098146	.0386100	.0219085	.1294680	.0326302	.4132839	.1007391
-1.05816	.11298	.00755	.00835	-.10956	1.17202	.0127636	.0083473	.0265921	.0173910	.1317047	.0339816	.4181355	.1036633
-1.20698	.09710	.00647	.00711	-.09546	1.30560	.0094276	.0071139	.0182388	.0137627	.1333559	.0351320	.4214713	.1059814
-1.35579	.08348	.00555	.00607	-.08304	1.44116	.0069691	.0060731	.0124454	.0108453	.1345760	.0361133	.4237544	.1078124
-1.50461	.07180	.00476	.00519	-.07212	1.57845	.0051552	.0051919	.0084389	.0084991	.1354781	.0369515	.4253084	.1092518
-1.65343	.06177	.00409	.00444	-.06257	1.71726	.0038155	.0044439	.0056782	.0066132	.1361456	.0376684	.4263588	.1103763
-1.80224	.05315	.00351	.00381	-.05423	1.85739	.0028254	.0038074	.0037842	.0050995	.1366398	.0382824	.4270629	.1112478
-1.95106	.04575	.00302	.00326	-.04696	1.99869	.0020930	.0032649	.0024918	.0038870	.1370058	.0388087	.4275299	.1119165
-2.09988	.03938	.00260	.00280	-.04063	2.14100	.0015510	.0028017	.0016157	.0029185	.1372769	.0392601	.4278355	.1124229
-2.24869	.03391	.00223	.00241	-.03514	2.28419	.0011497	.0024056	.0010266	.0021480	.1374779	.0396475	.4280321	.1127999
-2.39751	.02920	.00192	.00207	-.03037	2.42814	.0008525	.0020666	.0006343	.0015377	.1376268	.0399803	.4281557	.1130741
-2.54633	.02514	.00165	.00178	-.02624	2.57275	.0006322	.0017762	.0003763	.0010573	.1377373	.0402662	.4282309	.1132672
-2.69514	.02165	.00142	.00153	-.02267	2.71794	.0004689	.0015271	.0002094	.0006818	.1378192	.0405120	.4282745	.1133966
-2.84396	.01865	.00123	.00131	-.01957	2.86362	.0003479	.0013134	.0001035	.0003909	.1378800	.0407234	.4282978	.1134764
-2.99278	.01607	.00106	.00113	-.01689	3.00972	.0002581	.0011299	.0000384	.0001682	.1379251	.0409052	.4283083	.1135180
-3.14159	.01384	.00091	.00097	-.01458	3.15620	.0001915	.0009723	.0000000	.0000000	.1379586	.0410616	.4283112	.1135305

SOLUTION VS DEPTH, THETA= 7.50 DEGREES, KX= .1309 RADIANS, H/d= .1280, WAVE HEIGHT=2.03758E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.42300	.53355	.07946	.10285	-.31001	-.00040	.2846717	.1028536	1.0147381	.3666310	.0000000	.0000000	.0000000	.0000000
.27447	.45246	.06577	.08262	-.29889	.10275	.2047172	.0826179	.6993273	.2822282	.0363431	.0137735	.1272904	.0481858
.12595	.38492	.05493	.06723	-.27889	.20829	.1481651	.0672279	.4841355	.2196699	.0625490	.0249014	.2151771	.0854579
-.02258	.32827	.04617	.05529	-.25502	.31714	.1077624	.0552853	.3361128	.1724356	.0815548	.0339995	.2760906	.1145765
-.17110	.28049	.03900	.04585	-.23006	.42964	.0786772	.0458520	.2337099	.1362030	.0954002	.0415102	.3184070	.1374968
-.31963	.24003	.03307	.03829	-.20557	.54583	.0576160	.0382883	.1625905	.1080484	.1055216	.0477587	.3478372	.1556354
-.46815	.20566	.02813	.03215	-.18239	.66556	.0422951	.0321479	.1130736	.0859455	.1129413	.0529894	.3683086	.1700419
-.61667	.17638	.02398	.02711	-.16097	.78861	.0311093	.0271119	.0785486	.0684553	.1183925	.0573902	.3825389	.1815080
-.76520	.15139	.02048	.02295	-.14147	.91470	.0229187	.0229471	.0544638	.0545313	.1224047	.0611077	.3924167	.1906413
-.91372	.13003	.01751	.01948	-.12392	1.04354	.0169069	.0194793	.0376663	.0433972	.1253622	.0642584	.3992585	.1979137
-1.06225	.11174	.01500	.01658	-.10827	1.17484	.0124858	.0165756	.0259622	.0344663	.1275450	.0669359	.4039837	.2036960
-1.21077	.09607	.01286	.01413	-.09438	1.30834	.0092292	.0141330	.0178199	.0272882	.1291576	.0692164	.4072351	.2082820
-1.35930	.08263	.01103	.01207	-.08214	1.44378	.0068273	.0120704	.0121683	.0215130	.1303500	.0711623	.4094621	.2119061
-1.50782	.07109	.00947	.01032	-.07137	1.58092	.0050538	.0103232	.0082567	.0168658	.1312323	.0728253	.4109789	.2147562
-1.65635	.06118	.00814	.00884	-.06194	1.71956	.0037430	.0088393	.0055593	.0131285	.1318856	.0742484	.4120049	.2169837
-1.80487	.05266	.00699	.00758	-.05371	1.85951	.0027735	.0075761	.0037074	.0101271	.1323695	.0754674	.4126930	.2187107
-1.95340	.04534	.00601	.00650	-.04652	2.00060	.0020559	.0064988	.0024428	.0077219	.1327281	.0765126	.4131498	.2200362
-2.10192	.03904	.00517	.00558	-.04027	2.14269	.0015245	.0055786	.0015850	.0058000	.1329940	.0774095	.4134489	.2210404
-2.25045	.03363	.00445	.00479	-.03484	2.28565	.0011307	.0047916	.0010077	.0042700	.1331912	.0781796	.4136414	.2217882
-2.39897	.02896	.00383	.00412	-.03012	2.42935	.0008389	.0041177	.0006230	.0030579	.1333375	.0788413	.4137625	.2223324
-2.54749	.02495	.00330	.00354	-.02604	2.57372	.0006225	.0035402	.0003698	.0021032	.1334460	.0794100	.4138362	.2227156
-2.69602	.02150	.00284	.00304	-.02249	2.71864	.0004620	.0030447	.0002059	.0013566	.1335266	.0798990	.4138790	.2229726
-2.84454	.01852	.00245	.00262	-.01943	2.86406	.0003430	.0026194	.0001019	.0007781	.1335863	.0803196	.4139018	.2231311
-2.99307	.01596	.00211	.00225	-.01677	3.00990	.0002546	.0022542	.0000378	.0003348	.1336307	.0806815	.4139122	.2232138
-3.14159	.01375	.00181	.00194	-.01448	3.15611	.0001891	.0019403	.0000000	.0000000	.1336637	.0809930	.4139150	.2232386

LUTION VS DEPTH, THETA= 15.00 DEGREES, KX= .2618 RADIANS, H/d= .1280, WAVE HEIGHT=2.03758E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.39633	.49867	.15065	.19108	-.28076	-.00107	.2486697	.1910807	.8797753	.6760295	.0000000	.0000000	.0000000	.0000000
.24892	.42478	.12541	.15509	-.27436	.10527	.1804372	.1550892	.6117748	.5258320	.0316281	.0255151	.1099374	.0885854
.10151	.36267	.10519	.12721	-.25840	.21333	.1315289	.1272107	.4265614	.4125569	.0546221	.0463225	.1864698	.1577510
-.04591	.31021	.08873	.10526	-.23789	.32413	.0962287	.1052641	.2978938	.3258645	.0714094	.0634575	.2398671	.2121777
-.19332	.26573	.07517	.08773	-.21573	.43810	.0706101	.0877335	.2081779	.2586623	.0837066	.0776827	.2771681	.2552613
-.34073	.22789	.06389	.07355	-.19357	.55536	.0519360	.0735534	.1454654	.2060128	.0927391	.0895707	.3032340	.2895110
-.48815	.19564	.05445	.06196	-.17234	.67582	.0382755	.0619615	.1015620	.1644115	.0993883	.0995590	.3214416	.3168138
-.63556	.16809	.04650	.05240	-.15254	.79930	.0282537	.0524015	.0708048	.1313199	.1042919	.1079884	.3341462	.3386112
-.78297	.14451	.03979	.04446	-.13440	.92559	.0208840	.0444595	.0492573	.1048630	.1079137	.1151277	.3429956	.3560195
-.93039	.12431	.03408	.03782	-.11800	1.05442	.0154538	.0378216	.0341716	.0836314	.1105921	.1211924	.3491449	.3699129
-1.07780	.10699	.02923	.03225	-.10330	1.18554	.0114463	.0322458	.0236229	.0665487	.1125748	.1263568	.3534047	.3809821
-1.22522	.09211	.02510	.02754	-.09023	1.31871	.0084848	.0275426	.0162600	.0527820	.1140438	.1307636	.3563444	.3897776
-1.37263	.07933	.02156	.02356	-.07866	1.45369	.0062937	.0235616	.0111332	.0416796	.1151331	.1345304	.3583634	.3967401
-1.52004	.06834	.01854	.02018	-.06846	1.59028	.0046710	.0201820	.0075743	.0327262	.1159413	.1377546	.3597423	.4022243
-1.66746	.05889	.01595	.01731	-.05951	1.72828	.0034684	.0173060	.0051129	.0255115	.1165412	.1405177	.3606774	.4065168
-1.81487	.05076	.01372	.01485	-.05168	1.86751	.0025764	.0148536	.0034182	.0197066	.1169868	.1428881	.3613062	.4098497
-1.96228	.04376	.01181	.01276	-.04483	2.00782	.0019145	.0127586	.0022578	.0150463	.1173178	.1449233	.3617246	.4124112
-2.10970	.03772	.01017	.01097	-.03886	2.14907	.0014231	.0109663	.0014685	.0113161	.1175638	.1466720	.3619992	.4143543
-2.25711	.03253	.00877	.00943	-.03366	2.29115	.0010581	.0094312	.0009359	.0083417	.1177467	.1481754	.3621765	.4158032
-2.40452	.02805	.00755	.00811	-.02915	2.43394	.0007869	.0081149	.0005800	.0059812	.1178827	.1494687	.3622882	.4168589
-2.55194	.02419	.00651	.00699	-.02522	2.57736	.0005853	.0069851	.0003451	.0041188	.1179838	.1505816	.3623564	.4176033
-2.69935	.02087	.00561	.00601	-.02182	2.72131	.0004354	.0060148	.0001926	.0026600	.1180590	.1515398	.3623960	.4181030
-2.84677	.01800	.00484	.00518	-.01887	2.86573	.0003239	.0051808	.0000955	.0015274	.1181150	.1523650	.3624172	.4184116
-2.99418	.01553	.00417	.00446	-.01631	3.01055	.0002411	.0044636	.0000355	.0006580	.1181566	.1530759	.3624269	.4185727
-3.14159	.01339	.00360	.00385	-.01410	3.15573	.0001794	.0038465	.0000000	.0000000	.1181876	.1536884	.3624295	.4186212

UTION VS DEPTH, THETA= 30.00 DEGREES, KX= .5236 RADIANS, H/d= .1280, WAVE HEIGHT=2.03758E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.30792	.39093	.25257	.30205	-.19490	.00000	.1528297	.3020480	.5271884	1.0419193	.0000000	.0000000	.0000000	.0000000
.16419	.33734	.21369	.25234	-.19930	.11525	.1138012	.2523356	.3762026	.8341677	.0191614	.0398407	.0649221	.1348248
.02046	.29113	.18154	.21173	-.19374	.23064	.0847560	.2117321	.2680034	.6695087	.0334307	.0731909	.1112179	.2428864
-.12327	.25131	.15474	.17841	-.18264	.34728	.0631547	.1784087	.1906215	.5384958	.0440603	.1012284	.1441770	.3296995
-.26700	.21700	.13224	.15090	-.16871	.46573	.0470875	.1509023	.1353575	.4337833	.0519828	.1248943	.1676034	.3995723
-.41073	.18743	.11327	.12806	-.15366	.58629	.0351304	.1280647	.0959363	.3497277	.0578914	.1449422	.1842253	.4558793
-.55446	.16194	.09718	.10900	-.13852	.70903	.0262259	.1089994	.0678499	.2819965	.0623008	.1619788	.1959958	.5012781
-.69819	.13996	.08351	.09300	-.12392	.83391	.0195897	.0930045	.0478657	.2272478	.0655933	.1764958	.2043117	.5378749
-.84192	.12100	.07184	.07953	-.11021	.96082	.0146405	.0795266	.0336685	.1828854	.0680533	.1888947	.2101711	.5673491
-.98565	.10463	.06187	.06813	-.09756	1.08964	.0109469	.0681262	.0236009	.1468766	.0698921	.1995058	.2142868	.5910474
-1.12938	.09049	.05332	.05845	-.08605	1.22018	.0081885	.0584513	.0164771	.1176167	.0712673	.2086023	.2171670	.6100552
-1.27310	.07828	.04599	.05022	-.07567	1.35230	.0061275	.0502172	.0114492	.0938302	.0722961	.2164117	.2191739	.6252508
-1.41683	.06773	.03969	.04319	-.06639	1.48584	.0045867	.0431922	.0079110	.0744961	.0730661	.2231246	.2205653	.6373475
-1.56056	.05860	.03428	.03719	-.05813	1.62063	.0034343	.0371862	.0054298	.0587924	.0736425	.2289010	.2215240	.6469263
-1.70429	.05072	.02961	.03204	-.05081	1.75654	.0025721	.0320420	.0036969	.0460539	.0740742	.2338760	.2221799	.6544611
-1.84802	.04390	.02559	.02763	-.04435	1.89344	.0019268	.0276292	.0024924	.0357402	.0743975	.2381643	.2226247	.6603392
-1.99175	.03800	.02212	.02384	-.03867	2.03122	.0014436	.0238387	.0016600	.0274107	.0746397	.2418630	.2229231	.6648775
-2.13548	.03289	.01913	.02058	-.03369	2.16975	.0010818	.0205791	.0010884	.0207048	.0748212	.2450551	.2231206	.6683353
-2.27921	.02847	.01654	.01777	-.02932	2.30896	.0008108	.0177733	.0006992	.0153273	.0749572	.2478113	.2232491	.6709248
-2.42294	.02465	.01431	.01536	-.02550	2.44876	.0006077	.0153559	.0004368	.0110355	.0750591	.2501921	.2233307	.6728193
-2.56667	.02134	.01238	.01327	-.02217	2.58907	.0004556	.0132719	.0002619	.0076303	.0751356	.2522495	.2233809	.6741508
-2.71040	.01848	.01071	.01147	-.01926	2.72983	.0003416	.0114739	.0001473	.0049474	.0751928	.2540278	.2234103	.6750646
-2.85413	.01600	.00927	.00992	-.01673	2.87097	.0002561	.0099221	.0000736	.0028522	.0752358	.2555654	.2234262	.6756252
-2.99786	.01386	.00802	.00858	-.01452	3.01246	.0001920	.0085819	.0000276	.0012335	.0752680	.2568952	.2234335	.6759188
-3.14159	.01200	.00695	.00742	-.01260	3.15425	.0001440	.0074242	.0000000	.0000000	.0752922	.2580455	.2234355	.6760074

LUTION VS DEPTH, THETA= 45.00 DEGREES, KX= .7854 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.20338	.27021	.30464	.34676	-.10031	.00071	.0730111	.3467598	.2186847	1.0386245	.0000000	.0000000	.0000000	.0000000
.07857	.23974	.26529	.30146	-.11196	.11217	.0574739	.3014646	.1649746	.8653317	.0081423	.0404496	.0239406	.1188079
-.04623	.21250	.23133	.26217	-.11622	.22267	.0451551	.2621677	.1239789	.7198141	.0145464	.0756205	.0419714	.2177219
-.17103	.18824	.20193	.22820	-.11552	.33297	.0354344	.2281979	.0928674	.5980666	.0195753	.1062196	.0555027	.2999584
-.29583	.16670	.17642	.19888	-.11159	.44358	.0277901	.1988764	.0693647	.4964000	.0235205	.1328693	.0656261	.3682538
-.42063	.14763	.15423	.17357	-.10564	.55481	.0217933	.1735734	.0516768	.4115809	.0266146	.1561104	.0731792	.4249123
-.54543	.13076	.13488	.15173	-.09854	.66686	.0170974	.1517297	.0384080	.3408487	.0290414	.1764095	.0788005	.4718643
-.67023	.11587	.11798	.13286	-.09086	.77984	.0134251	.1328602	.0284829	.2818787	.0309460	.1941681	.0829746	.5107229
-.79503	.10274	.10317	.11655	-.08302	.89379	.0105560	.1165489	.0210784	.2327269	.0324424	.2097313	.0860672	.5428345
-.91983	.09119	.09018	.10244	-.07526	1.00871	.0083162	.1024421	.0155681	.1917734	.0336200	.2233965	.0883540	.5693236
-1.04464	.08105	.07874	.09024	-.06777	1.12459	.0065689	.0902399	.0114772	.1576686	.0345489	.2354200	.0900416	.5911290
-1.16944	.07216	.06865	.07969	-.06064	1.24139	.0052064	.0796882	.0084470	.1292873	.0352837	.2460236	.0912849	.6090352
-1.29424	.06438	.05972	.07057	-.05393	1.35904	.0041447	.0705721	.0062072	.1056898	.0358672	.2553999	.0921993	.6236979
-1.41904	.05760	.05179	.06271	-.04765	1.47751	.0033180	.0627100	.0045550	.0860890	.0363329	.2637168	.0928709	.6356650
-1.54384	.05172	.04472	.05595	-.04181	1.59673	.0026749	.0559482	.0033383	.0698240	.0367068	.2711211	.0933634	.6453941
-1.66864	.04664	.03840	.05016	-.03638	1.71666	.0021754	.0501571	.0024434	.0563370	.0370095	.2777421	.0937242	.6532666
-1.79344	.04229	.03270	.04523	-.03133	1.83724	.0017883	.0452277	.0017854	.0451557	.0372568	.2836942	.0939881	.6595998
-1.91824	.03859	.02754	.04107	-.02664	1.95843	.0014895	.0410684	.0013012	.0358777	.0374614	.2890791	.0941807	.6646563
-2.04304	.03550	.02283	.03760	-.02226	2.08018	.0012603	.0376031	.0009437	.0281575	.0376329	.2939883	.0943208	.6686521
-2.16785	.03296	.01849	.03477	-.01814	2.20246	.0010863	.0347692	.0006779	.0216962	.0377794	.2985044	.0944220	.6717630
-2.29265	.03093	.01444	.03252	-.01424	2.32524	.0009569	.0325159	.0004777	.0162321	.0379069	.3027030	.0944941	.6741298
-2.41745	.02939	.01063	.03080	-.01053	2.44850	.0008637	.0308032	.0003234	.0115328	.0380205	.3066541	.0945441	.6758623
-2.54225	.02830	.00700	.02960	-.00694	2.57221	.0008010	.0296008	.0001999	.0073884	.0381244	.3104234	.0945767	.6770430
-2.66705	.02766	.00347	.02889	-.00345	2.69637	.0007649	.0288877	.0000955	.0036052	.0382221	.3140731	.0945952	.6777290
-2.79185	.02744	.00000	.02865	.00000	2.82095	.0007531	.0286514	.0000000	.0000000	.0383168	.3176636	.0946011	.6779540

UTION VS DEPTH, THETA= 60.00 DEGREES, KX= 1.0472 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
.10706	.16133	.32329	.35351	-.01616	-.00084	.0260262	.3535102	.0754478	1.0247963	.0000000	.0000000	.0000000	.0000000
-.01372	.14500	.28452	.31211	-.03293	.11691	.0210244	.3121107	.0584084	.8670833	.0028416	.0401996	.0080841	.1142583
-.13451	.13007	.25046	.27535	-.04353	.23303	.0169185	.2753505	.0449583	.7316998	.0051331	.0756787	.0143269	.2108154
-.25530	.11651	.22052	.24287	-.04962	.34816	.0135744	.2428652	.0344323	.6160401	.0069747	.1069759	.0191216	.2922109
-.37609	.10425	.19419	.21425	-.05244	.46275	.0108678	.2142499	.0262541	.5175771	.0084509	.1345830	.0227867	.3606747
-.49688	.09321	.17100	.18910	-.05295	.57716	.0086882	.1890980	.0199392	.4339752	.0096319	.1589428	.0255765	.4181428
-.61766	.08331	.15055	.16702	-.05186	.69160	.0069401	.1670230	.0150892	.3631393	.0105758	.1804504	.0276920	.4662838
-.73845	.07445	.13250	.14767	-.04969	.80625	.0055429	.1476696	.0113818	.3032247	.0113297	.1994560	.0292907	.5065282
-.85924	.06655	.11653	.13072	-.04683	.92120	.0044292	.1307176	.0085599	.2526263	.0119320	.2162689	.0304950	.5400983
-.98003	.05953	.10240	.11588	-.04355	1.03653	.0035435	.1158826	.0064202	.2099587	.0124135	.2311621	.0313997	.5680357
-1.10082	.05330	.08985	.10291	-.04007	1.15226	.0028406	.1029141	.0048036	.1740314	.0127990	.2443761	.0320776	.5912265
-1.22160	.04779	.07870	.09159	-.03651	1.26843	.0022838	.0915934	.0035861	.1438242	.0131085	.2561232	.0325843	.6104231
-1.34239	.04293	.06876	.08173	-.03298	1.38502	.0018434	.0817299	.0026719	.1184641	.0133578	.2665909	.0329622	.6262637
-1.46318	.03867	.05987	.07316	-.02954	1.50203	.0014956	.0731585	.0019872	.0972035	.0135594	.2759453	.0332436	.6392888
-1.58397	.03495	.05189	.06574	-.02622	1.61945	.0012216	.0657369	.0014755	.0794023	.0137235	.2843337	.0334527	.6499547
-1.70476	.03172	.04470	.05934	-.02304	1.73727	.0010061	.0593424	.0010937	.0645107	.0138581	.2918878	.0336079	.6586462
-1.82555	.02894	.03819	.05387	-.02002	1.85546	.0008372	.0538703	.0008090	.0520551	.0139694	.2987252	.0337228	.6656861
-1.94633	.02656	.03225	.04923	-.01714	1.97400	.0007055	.0492316	.0005965	.0416261	.0140626	.3049519	.0338077	.6713439
-2.06712	.02457	.02679	.04535	-.01441	2.09289	.0006035	.0453513	.0004374	.0328674	.0141416	.3106641	.0338701	.6758429
-2.18791	.02292	.02174	.04217	-.01181	2.21209	.0005254	.0421670	.0003173	.0254664	.0142098	.3159497	.0339157	.6793659
-2.30870	.02161	.01702	.03963	-.00931	2.33161	.0004669	.0396279	.0002256	.0191463	.0142697	.3208897	.0339485	.6820602
-2.42949	.02060	.01254	.03769	-.00690	2.45142	.0004245	.0376936	.0001538	.0136588	.0143235	.3255594	.0339714	.6840415
-2.55027	.01989	.00826	.03633	-.00456	2.57151	.0003958	.0363334	.0000956	.0087773	.0143731	.3300302	.0339865	.6853965
-2.67106	.01947	.00410	.03553	-.00227	2.69189	.0003792	.0355258	.0000458	.0042911	.0144199	.3343701	.0339950	.6861857
-2.79185	.01933	.00000	.03526	.00000	2.81254	.0003738	.0352580	.0000000	.0000000	.0144654	.3386450	.0339978	.6864449

SOLUTION VS DEPTH, THETA= 90.00 DEGREES, KX= 1.5708 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
-.05096	-.01609	.29450	.30637	.12010	.00076	-.0002590	.3063678	-.0007072	.8366576	.0000000	.0000000	.0000000	.0000000
-.17475	-.01288	.26290	.27561	.09621	.12681	-.0001660	.2756113	-.0004344	.7213039	-.0000242	.0331109	-.0000649	.0886381
-.28853	-.01030	.23456	.24769	.07699	.25041	-.0001062	.2476852	-.0002658	.6200351	-.0000397	.0628831	-.0001048	.1649517
-.40232	-.00823	.20916	.22243	.06156	.37204	-.0000678	.2224253	-.0001620	.5314924	-.0000496	.0896294	-.0001291	.2304662
-.51611	-.00658	.18639	.19965	.04918	.49211	-.0000432	.1996515	-.0000984	.4543558	-.0000559	.1136429	-.0001439	.2865547
-.62989	-.00525	.16599	.17918	.03926	.61090	-.0000276	.1791775	-.0000596	.3873741	-.0000599	.1351958	-.0001529	.3344437
-.74368	-.00419	.14769	.16082	.03133	.72869	-.0000175	.1608179	-.0000359	.3293823	-.0000625	.1545394	-.0001584	.3752226
-.85747	-.00334	.13129	.14439	.02499	.84567	-.0000112	.1443928	-.0000216	.2793109	-.0000641	.1719039	-.0001616	.4098533
-.97126	-.00266	.11656	.12973	.01992	.96200	-.0000071	.1297316	-.0000129	.2361887	-.0000651	.1874998	-.0001636	.4391820
-1.08504	-.00212	.10333	.11667	.01588	1.07781	-.0000045	.1166747	-.0000077	.1991414	-.0000658	.2015188	-.0001648	.4639495
-1.19883	-.00169	.09143	.10507	.01265	1.19322	-.0000029	.1050750	-.0000046	.1673866	-.0000662	.2141349	-.0001655	.4848026
-1.31262	-.00135	.08071	.09480	.01007	1.30829	-.0000018	.0947977	-.0000027	.1402279	-.0000665	.2255064	-.0001659	.5023039
-1.42640	-.00108	.07103	.08572	.00801	1.42310	-.0000012	.0857209	-.0000016	.1170473	-.0000667	.2357768	-.0001661	.5169412
-1.54019	-.00086	.06227	.07774	.00637	1.53771	-.0000007	.0777351	-.0000009	.0972979	-.0000668	.2450764	-.0001663	.5291361
-1.65398	-.00069	.05431	.07074	.00505	1.65214	-.0000005	.0707426	-.0000005	.0804960	-.0000668	.2535238	-.0001664	.5392514
-1.76777	-.00055	.04705	.06466	.00400	1.76644	-.0000003	.0646567	-.0000003	.0662140	-.0000669	.2612271	-.0001664	.5475983
-1.88155	-.00044	.04041	.05940	.00316	1.88063	-.0000002	.0594017	-.0000002	.0540732	-.0000669	.2682853	-.0001664	.5544418
-1.99534	-.00036	.03428	.05491	.00248	1.99474	-.0000001	.0549114	-.0000001	.0437375	-.0000669	.2747890	-.0001664	.5600066
-2.10913	-.00029	.02860	.05113	.00192	2.10878	-.0000001	.0511291	-.0000001	.0349070	-.0000669	.2808220	-.0001665	.5644810
-2.22291	-.00024	.02329	.04801	.00147	2.22276	-.0000001	.0480069	.0000000	.0273128	-.0000669	.2864622	-.0001665	.5680209
-2.33670	-.00020	.01828	.04550	.00109	2.33669	.0000000	.0455050	.0000000	.0207115	-.0000670	.2917824	-.0001665	.5707532
-2.45049	-.00017	.01351	.04359	.00077	2.45058	.0000000	.0435914	.0000000	.0148804	-.0000670	.2968514	-.0001665	.5727782
-2.56428	-.00015	.00891	.04224	.00049	2.56444	.0000000	.0422419	.0000000	.0096132	-.0000670	.3017348	-.0001665	.5741717
-2.67806	-.00014	.00443	.04144	.00024	2.67827	.0000000	.0414390	.0000000	.0047152	-.0000670	.3064957	-.0001665	.5749869
-2.79185	-.00014	.00000	.04117	.00000	2.79207	.0000000	.0411725	.0000000	.0000000	-.0000670	.3111958	-.0001665	.5752551

OLUTION VS DEPTH, THETA=120.00 DEGREES, KX= 2.0944 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
-.17890	-.13823	.21689	.21960	.21407	-.00044	-.0191078	.2195999	-.0499278	.5738037	.0000000	.0000000	.0000000	.0000000
-.28777	-.12375	.19525	.19970	.18567	.13015	-.0153134	.1996955	-.0383460	.5000531	-.0018738	.0228250	-.0048053	.0584570
-.39665	-.11083	.17562	.18141	.16127	.25788	-.0122843	.1814141	-.0294233	.4345241	-.0033761	.0435712	-.0084944	.1093321
-.50552	-.09932	.15782	.16468	.14026	.38314	-.0098653	.1646785	-.0225555	.3765097	-.0045818	.0624113	-.0113240	.1534819
-.61439	-.08907	.14170	.14940	.12215	.50627	-.0079331	.1494046	-.0172740	.3253224	-.0055507	.0795089	-.0134922	.1916872
-.72326	-.07993	.12709	.13551	.10650	.62757	-.0063891	.1355051	-.0132165	.2803040	-.0063304	.0950184	-.0151520	.2246553
-.83214	-.07180	.11387	.12289	.09294	.74728	-.0051550	.1228912	-.0101023	.2408316	-.0069588	.1090845	-.0164214	.2530241
-.94101	-.06456	.10188	.11148	.08117	.86562	-.0041681	.1114751	-.0077146	.2063226	-.0074663	.1218426	-.0173912	.2773656
-1.04988	-.05813	.09102	.10117	.07092	.98276	-.0033788	.1011710	-.0058858	.1762366	-.0078772	.1334183	-.0181316	.2981908
-1.15876	-.05242	.08117	.09190	.06197	1.09885	-.0027473	.0918969	-.0044867	.1500762	-.0082106	.1439283	-.0186962	.3159541
-1.26763	-.04735	.07223	.08357	.05413	1.21404	-.0022421	.0835749	-.0034174	.1273866	-.0084822	.1534803	-.0191265	.3310582
-1.37650	-.04287	.06410	.07613	.04724	1.32842	-.0018377	.0761321	-.0026010	.1077535	-.0087043	.1621742	-.0194541	.3438584
-1.48538	-.03891	.05669	.06950	.04115	1.44210	-.0015142	.0695011	-.0019783	.0908015	-.0088868	.1701020	-.0197034	.3546670
-1.59425	-.03543	.04993	.06362	.03575	1.55515	-.0012556	.0636197	-.0015037	.0761911	-.0090376	.1773486	-.0198930	.3637575
-1.70312	-.03239	.04374	.05843	.03094	1.66765	-.0010489	.0584314	-.0011420	.0636160	-.0091630	.1839926	-.0200370	.3713681
-1.81199	-.02973	.03804	.05389	.02662	1.77965	-.0008841	.0538852	-.0008663	.0527997	-.0092683	.1901067	-.0201463	.3777054
-1.92087	-.02744	.03278	.04994	.02273	1.89121	-.0007531	.0499355	-.0006559	.0434930	-.0093574	.1957584	-.0202292	.3829472
-2.02974	-.02548	.02790	.04654	.01919	2.00236	-.0006493	.0465422	-.0004949	.0354703	-.0094337	.2010103	-.0202918	.3872457
-2.13861	-.02383	.02334	.04367	.01594	2.11315	-.0005679	.0436703	-.0003710	.0285271	-.0095000	.2059211	-.0203389	.3907295
-2.24749	-.02247	.01905	.04129	.01294	2.22359	-.0005047	.0412898	-.0002747	.0224767	-.0095584	.2105461	-.0203741	.3935060
-2.35636	-.02137	.01499	.03938	.01013	2.33372	-.0004567	.0393758	-.0001989	.0171479	-.0096107	.2149372	-.0203999	.3956630
-2.46523	-.02053	.01109	.03791	.00747	2.44354	-.0004216	.0379079	-.0001377	.0123814	-.0096585	.2191443	-.0204182	.3972705
-2.57411	-.01994	.00732	.03687	.00492	2.55309	-.0003977	.0368705	-.0000866	.0080284	-.0097031	.2232149	-.0204304	.3983815
-2.68298	-.01959	.00364	.03625	.00244	2.66236	-.0003838	.0362525	-.0000418	.0039469	-.0097457	.2271955	-.0204374	.3990334
-2.79185	-.01947	.00000	.03605	.00000	2.77137	-.0003793	.0360472	.0000000	.0000000	-.0097872	.2311313	-.0204397	.3992483

SOLUTION VS DEPTH, THETA=150.00 DEGREES, KX= 2.6180 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
-.25006	-.20922	.11373	.11353	.26767	.00013	-.0437742	.1135257	-.1112651	.2885592	.0000000	.0000000	.0000000	.0000000
-.35596	-.18897	.10286	.10389	.23705	.13273	-.0357101	.1038868	-.0869858	.2530565	-.0042090	.0115129	-.0104982	.0286808
-.46187	-.17069	.09293	.09497	.21006	.26228	-.0291365	.0949652	-.0678875	.2212669	-.0076429	.0220429	-.0186994	.0537981
-.56778	-.15421	.08388	.08674	.18624	.38915	-.0237820	.0867376	-.0528928	.1929106	-.0104452	.0316648	-.0250952	.0757305
-.67369	-.13937	.07563	.07918	.16518	.51364	-.0194233	.0791753	-.0411417	.1677063	-.0127331	.0404506	-.0300747	.0948266
-.77960	-.12601	.06811	.07225	.14653	.63604	-.0158776	.0722464	-.0319497	.1453782	-.0146024	.0484690	-.0339452	.1114057
-.88550	-.11399	.06126	.06592	.12999	.75657	-.0129948	.0659168	-.0247727	.1256602	-.0161313	.0557853	-.0369489	.1257583
-.99141	-.10321	.05502	.06015	.11529	.87546	-.0106525	.0601517	-.0191791	.1082995	-.0173835	.0624611	-.0392763	.1381474
-1.09732	-.09354	.04933	.05492	.10220	.99287	-.0087503	.0549166	-.0148276	.0930578	-.0184110	.0685545	-.0410771	.1488101
-1.20323	-.08489	.04415	.05018	.09051	1.10897	-.0072064	.0501772	-.0114482	.0797126	-.0192559	.0741196	-.0424685	.1579590
-1.30914	-.07716	.03941	.04590	.08004	1.22390	-.0059541	.0459010	-.0088282	.0680580	-.0199528	.0792073	-.0435422	.1657841
-1.41505	-.07028	.03508	.04206	.07065	1.33778	-.0049391	.0420566	-.0068002	.0579037	-.0205297	.0838650	-.0443698	.1724543
-1.52095	-.06417	.03112	.03861	.06220	1.45071	-.0041172	.0386147	-.0052325	.0490753	-.0210092	.0881369	-.0450070	.1781192
-1.62686	-.05876	.02748	.03555	.05456	1.56280	-.0034524	.0355479	-.0040220	.0414130	-.0214101	.0920641	-.0454970	.1829110
-1.73277	-.05400	.02413	.03283	.04762	1.67411	-.0029156	.0328312	-.0030878	.0347709	-.0217473	.0956851	-.0458735	.1869452
-1.83868	-.04983	.02104	.03044	.04130	1.78472	-.0024832	.0304414	-.0023669	.0290160	-.0220332	.0990356	-.0461624	.1903230
-1.94459	-.04622	.01817	.02836	.03550	1.89469	-.0021361	.0283580	-.0018099	.0240268	-.0222778	.1021493	-.0463835	.1931318
-2.05049	-.04312	.01549	.02656	.03015	2.00407	-.0018591	.0265625	-.0013782	.0196923	-.0224893	.1050575	-.0465524	.1954469
-2.15640	-.04049	.01298	.02504	.02518	2.11291	-.0016398	.0250387	-.0010420	.0159108	-.0225746	.1077900	-.0466805	.1973322
-2.26231	-.03832	.01061	.02377	.02053	2.22123	-.0014686	.0237726	-.0007777	.0125886	-.0228392	.1103748	-.0467769	.1988414
-2.36822	-.03658	.00836	.02275	.01612	2.32908	-.0013378	.0227526	-.0005668	.0096387	-.0229878	.1128385	-.0468481	.2000184
-2.47413	-.03524	.00619	.02197	.01192	2.43647	-.0012417	.0219691	-.0003945	.0069801	-.0231244	.1152067	-.0468990	.2008985
-2.58003	-.03429	.00409	.02141	.00787	2.54343	-.0011760	.0214147	-.0002491	.0045360	-.0232525	.1175040	-.0469331	.2015083
-2.68594	-.03373	.00203	.02108	.00391	2.64996	-.0011376	.0210842	-.0001205	.0022330	-.0233750	.1197545	-.0469526	.2018667
-2.79185	-.03354	.00000	.02097	.00000	2.75608	-.0011250	.0209743	.0000000	.0000000	-.0234948	.1219817	-.0469590	.2019850

SOLUTION VS DEPTH, THETA=180.00 DEGREES, KX= 3.1416 RADIANS, H/d= .2520, WAVE HEIGHT=2.00516E-02 DIMENSIONLESS W/RESP. TO PERIOD

KY	U	V	AX	AY	PRESS	FD	FI	MD	MI	FDS	FIS	MDS	MIS
-.27336	-.23255	.00000	.00000	.28506	.00000	-.0540798	.0000000	-.1361996	.0000000	.0000000	.0000000	.0000000	.0000000
-.37830	-.21053	.00000	.00000	.25379	.13318	-.0443220	.0000000	-.1069736	.0000000	-.0051630	.0000000	-.0127590	.0000000
-.48323	-.19059	.00000	.00000	.22603	.26326	-.0363250	.0000000	-.0838605	.0000000	-.0093944	.0000000	-.0227717	.0000000
-.58817	-.17256	.00000	.00000	.20136	.39060	-.0297774	.0000000	-.0656199	.0000000	-.0128627	.0000000	-.0306148	.0000000
-.69311	-.15627	.00000	.00000	.17940	.51549	-.0244215	.0000000	-.0512546	.0000000	-.0157065	.0000000	-.0367470	.0000000
-.79805	-.14158	.00000	.00000	.15982	.63821	-.0200442	.0000000	-.0399642	.0000000	-.0180395	.0000000	-.0415331	.0000000
-.90298	-.12833	.00000	.00000	.14234	.75898	-.0164694	.0000000	-.0311086	.0000000	-.0199554	.0000000	-.0452622	.0000000
-1.00792	-.11641	.00000	.00000	.12671	.87802	-.0135524	.0000000	-.0241765	.0000000	-.0215306	.0000000	-.0481629	.0000000
-1.11286	-.10571	.00000	.00000	.11271	.99551	-.0111738	.0000000	-.0187608	.0000000	-.0228279	.0000000	-.0504158	.0000000
-1.21779	-.09610	.00000	.00000	.10014	1.11160	-.0092358	.0000000	-.0145377	.0000000	-.0238988	.0000000	-.0521629	.0000000
-1.32273	-.08751	.00000	.00000	.08883	1.22644	-.0076580	.0000000	-.0112505	.0000000	-.0247852	.0000000	-.0535160	.0000000
-1.42767	-.07984	.00000	.00000	.07862	1.34015	-.0063746	.0000000	-.0086961	.0000000	-.0255214	.0000000	-.0545626	.0000000
-1.53261	-.07302	.00000	.00000	.06939	1.45285	-.0053319	.0000000	-.0067141	.0000000	-.0261357	.0000000	-.0553711	.0000000
-1.63754	-.06698	.00000	.00000	.06100	1.56462	-.0044858	.0000000	-.0051779	.0000000	-.0266508	.0000000	-.0559951	.0000000
-1.74248	-.06165	.00000	.00000	.05336	1.67555	-.0038005	.0000000	-.0039881	.0000000	-.0270855	.0000000	-.0564760	.0000000
-1.84742	-.05698	.00000	.00000	.04636	1.78571	-.0032469	.0000000	-.0030665	.0000000	-.0274553	.0000000	-.0568462	.0000000
-1.95235	-.05293	.00000	.00000	.03992	1.89517	-.0028014	.0000000	-.0023518	.0000000	-.0277726	.0000000	-.0571304	.0000000
-2.05729	-.04945	.00000	.00000	.03395	2.00398	-.0024449	.0000000	-.0017960	.0000000	-.0280479	.0000000	-.0573481	.0000000
-2.16223	-.04650	.00000	.00000	.02839	2.11219	-.0021622	.0000000	-.0013613	.0000000	-.0282896	.0000000	-.0575137	.0000000
-2.26717	-.04406	.00000	.00000	.02317	2.21983	-.0019409	.0000000	-.0010184	.0000000	-.0285049	.0000000	-.0576386	.0000000
-2.37210	-.04209	.00000	.00000	.01821	2.32693	-.0017716	.0000000	-.0007436	.0000000	-.0286997	.0000000	-.0577310	.0000000
-2.47704	-.04058	.00000	.00000	.01348	2.43353	-.0016470	.0000000	-.0005185	.0000000	-.0288791	.0000000	-.0577973	.0000000
-2.58198	-.03952	.00000	.00000	.00890	2.53964	-.0015617	.0000000	-.0003278	.0000000	-.0290474	.0000000	-.0578417	.0000000
-2.68691	-.03888	.00000	.00000	.00442	2.64528	-.0015119	.0000000	-.0001587	.0000000	-.0292087	.0000000	-.0578672	.0000000
-2.79185	-.03867	.00000	.00000	.00000	2.75045	-.0014956	.0000000	.0000000	.0000000	-.0293665	.0000000	-.0578755	.0000000

WATER SURFACE ELEVATION

/d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER

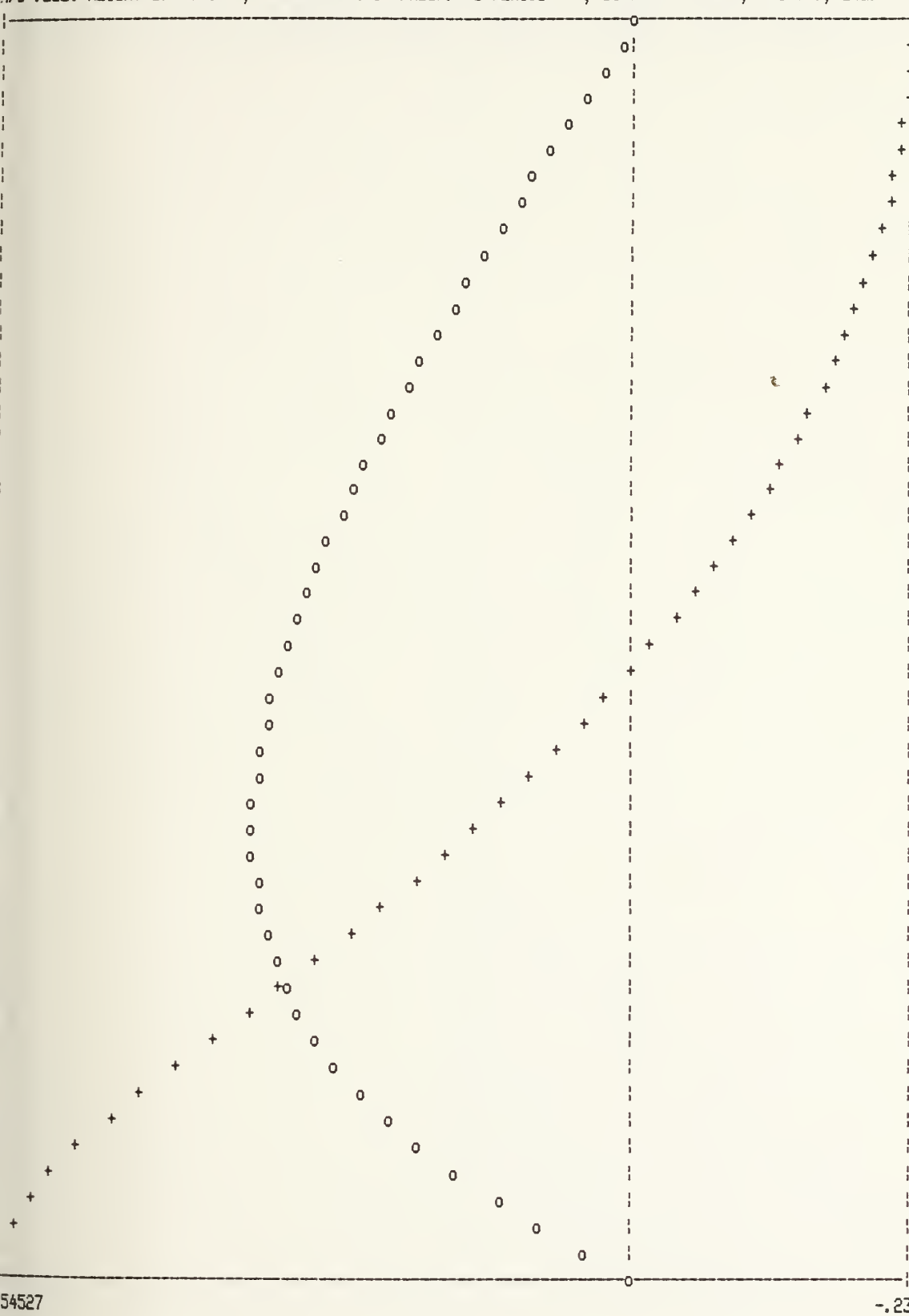
ELEV.VS. *K	TIME (K*G)^.5	DIST. *K	ANGLE DEGREES
-.27336	2.96157	3.14159	180.00
-.27298	2.89987	3.07614	176.25
-.27186	2.83817	3.01069	172.50
-.27000	2.77647	2.94524	168.75
-.26742	2.71477	2.87979	165.00
-.26413	2.65307	2.81434	161.25
-.26015	2.59137	2.74889	157.50
-.25546	2.52967	2.68344	153.75
-.25006	2.46797	2.61799	150.00
-.24391	2.40628	2.55254	146.25
-.23700	2.34458	2.48709	142.50
-.22931	2.28288	2.42164	138.75
-.22080	2.22118	2.35619	135.00
-.21149	2.15948	2.29074	131.25
-.20138	2.09778	2.22529	127.50
-.19050	2.03608	2.15984	123.75
-.17890	1.97438	2.09440	120.00
-.16660	1.91268	2.02895	116.25
-.15363	1.85098	1.96350	112.50
-.14001	1.78928	1.89805	108.75
-.12571	1.72758	1.83260	105.00
-.11071	1.66588	1.76715	101.25
-.09496	1.60418	1.70170	97.50
-.07839	1.54248	1.63625	93.75
-.06096	1.48078	1.57080	90.00
-.04263	1.41909	1.50535	86.25
-.02342	1.35739	1.43990	82.50
-.00334	1.29569	1.37445	78.75
.01753	1.23399	1.30900	75.00
.03911	1.17229	1.24355	71.25
.06128	1.11059	1.17810	67.50
.08396	1.04889	1.11265	63.75
.10706	.98719	1.04720	60.00
.13056	.92549	.98175	56.25
.15444	.86379	.91630	52.50
.17871	.80209	.85085	48.75
.20338	.74039	.78540	45.00
.22842	.67869	.71995	41.25
.25376	.61699	.65450	37.50
.27921	.55529	.58905	33.75
.30447	.49359	.52360	30.00
.32909	.43190	.45815	26.25
.35250	.37020	.39270	22.50
.37406	.30850	.32725	18.75
.39302	.24680	.26180	15.00
.40869	.18510	.19635	11.25
.42041	.12340	.13090	7.50
.42767	.06170	.06545	3.75
.43012	.00000	.00000	.00

3012

-.27336

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICLE VELOCITIES

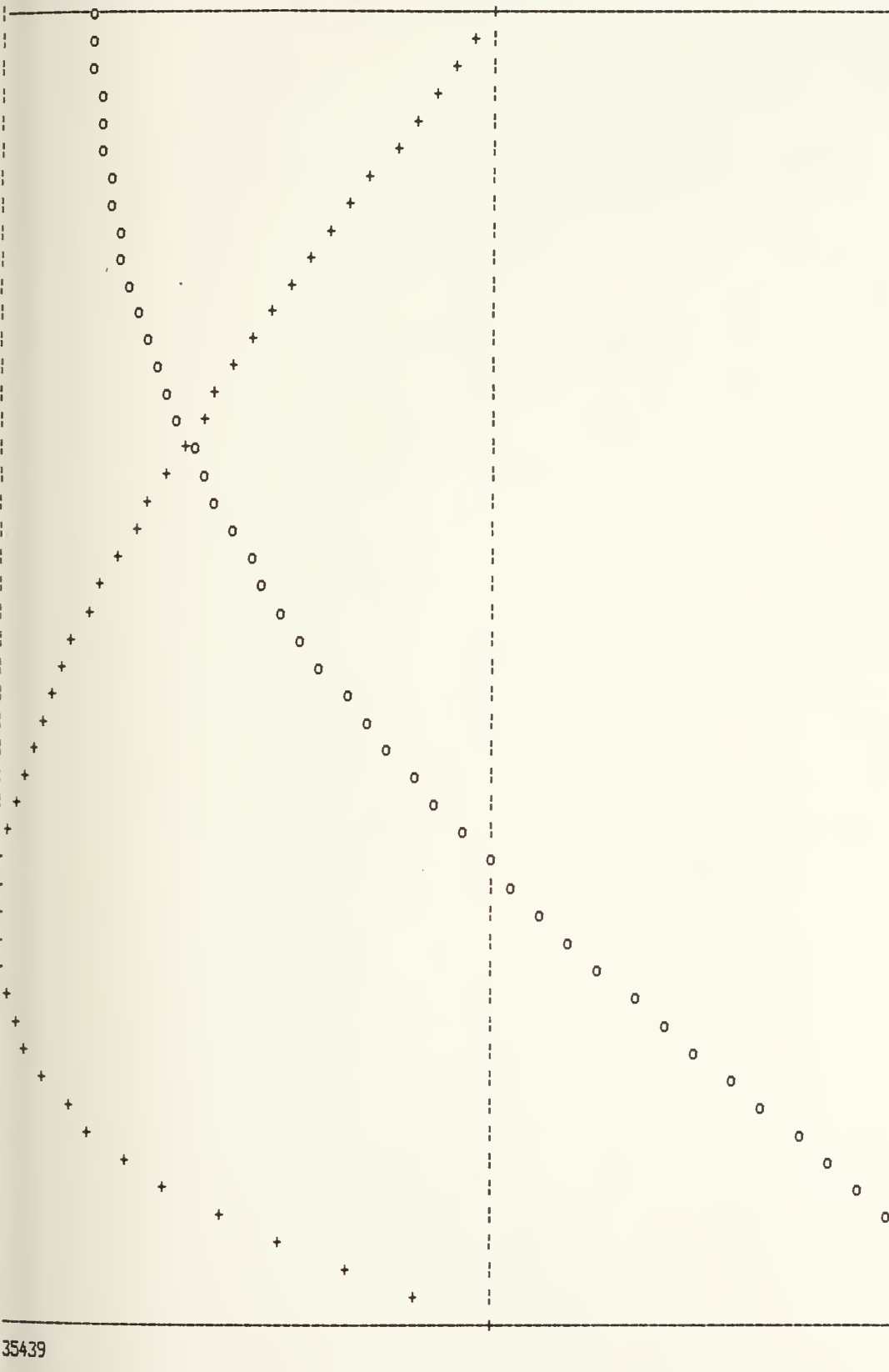
H/d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



U	V	DIST.	ANGLE
*SQRT(K/G)		*K	DEGREES
-.23255	.00000	3.14159	180.00
-.23219	.01442	3.07614	176.25
-.23111	.02883	3.01069	172.50
-.22930	.04319	2.94524	168.75
-.22676	.05750	2.87979	165.00
-.22349	.07173	2.81434	161.25
-.21948	.08586	2.74889	157.50
-.21472	.09987	2.68344	153.75
-.20922	.11373	2.61799	150.00
-.20298	.12743	2.55254	146.25
-.19600	.14095	2.48709	142.50
-.18827	.15426	2.42164	138.75
-.17980	.16735	2.35619	135.00
-.17057	.18018	2.29074	131.25
-.16058	.19274	2.22529	127.50
-.14980	.20499	2.15984	123.75
-.13823	.21689	2.09440	120.00
-.12586	.22840	2.02895	116.25
-.11266	.23947	1.96350	112.50
-.09865	.25006	1.89805	108.75
-.08381	.26013	1.83260	105.00
-.06813	.26964	1.76715	101.25
-.05163	.27856	1.70170	97.50
-.03429	.28686	1.63625	93.75
-.01609	.29450	1.57080	90.00
.00296	.30143	1.50535	86.25
.02289	.30760	1.43990	82.50
.04372	.31292	1.37445	78.75
.06545	.31732	1.30900	75.00
.08809	.32068	1.24355	71.25
.11163	.32288	1.17810	67.50
.13605	.32379	1.11265	63.75
.16133	.32329	1.04720	60.00
.18742	.32125	.98175	56.25
.21430	.31755	.91630	52.50
.24191	.31206	.85085	48.75
.27021	.30464	.78540	45.00
.29911	.29515	.71995	41.25
.32852	.28339	.65450	37.50
.35825	.26912	.58905	33.75
.38803	.25208	.52360	30.00
.41743	.23198	.45815	26.25
.44587	.20853	.39270	22.50
.47257	.18153	.32725	18.75
.49658	.15091	.26180	15.00
.51683	.11684	.19635	11.25
.53227	.07978	.13090	7.50
.54196	.04048	.06545	3.75
.54527	.00000	.00000	.00

HORIZONTAL(+) AND VERTICAL(o) SURFACE WATER PARTICAL ACCELERATIONS

H/d=.2520 HEIGHT=2.0052E-02, DIMENSIONLESS W/RESP. TO PERIOD , CURRENT= .0000, CRITER., EULER



Ax *1/G	Ay *1/G	DIST. *K	ANGLE DEGREES
.00000	.28506	3.14159	180.00
.01433	.28480	3.07614	176.25
.02865	.28400	3.01069	172.50
.04294	.28266	2.94524	168.75
.05720	.28078	2.87979	165.00
.07140	.27834	2.81434	161.25
.08553	.27535	2.74889	157.50
.09958	.27179	2.68344	153.75
.11353	.26767	2.61799	150.00
.12736	.26298	2.55254	146.25
.14106	.25773	2.48709	142.50
.15462	.25191	2.42164	138.75
.16802	.24553	2.35619	135.00
.18124	.23857	2.29074	131.25
.19427	.23102	2.22529	127.50
.20706	.22286	2.15984	123.75
.21960	.21407	2.09440	120.00
.23184	.20465	2.02895	116.25
.24375	.19456	1.96350	112.50
.25529	.18380	1.89805	108.75
.26643	.17238	1.83260	105.00
.27714	.16029	1.76715	101.25
.28738	.14754	1.70170	97.50
.29713	.13414	1.63625	93.75
.30637	.12010	1.57080	90.00
.31504	.10542	1.50535	86.25
.32311	.09009	1.43990	82.50
.33050	.07410	1.37445	78.75
.33711	.05744	1.30900	75.00
.34285	.04009	1.24355	71.25
.34759	.02204	1.17810	67.50
.35119	.00329	1.11265	63.75
.35351	-.01616	1.04720	60.00
.35439	-.03628	.98175	56.25
.35368	-.05704	.91630	52.50
.35121	-.07840	.85085	48.75
.34676	-.10031	.78540	45.00
.34009	-.12271	.71995	41.25
.33087	-.14553	.65450	37.50
.31867	-.16866	.58905	33.75
.30298	-.19193	.52360	30.00
.28316	-.21509	.45815	26.25
.25855	-.23776	.39270	22.50
.22853	-.25936	.32725	18.75
.19270	-.27912	.26180	15.00
.15104	-.29610	.19635	11.25
.10411	-.30925	.13090	7.50
.05316	-.31761	.06545	3.75
.00000	-.32048	.00000	.00

35439 -.32048

4. DIMENSIONAL FACTORS

OUTPUT VARIABLE DIMENSIONALIZATION FACTORS

Variable Name	Dimensionless Variable	Dimensionalization Coefficient
Depth	y^*	k^{-1}
Water Particle Velocities	U^*, V^*	$(g/k)^{1/2}$
Water Particle Accelerations	$\frac{DU^*}{Dt^*}$, $\frac{DV^*}{Dt^*}$	g
Pressure	p^*	$\rho g/k^2$
Drag Force per unit Depth	f_{Dh}^*	$\frac{C_D \rho g D}{2k}$
Inertia Force per unit Depth	f_{Ih}^*	$\frac{C_M \rho g \pi D^2}{4}$
Drag Force, Depth Integrated	F_{Dh}^*	$\frac{C_D \rho g D}{2k^2}$
Inertia Force, Depth Integrated	F_{Ih}^*	$\frac{C_M \rho g \pi D^2}{4k}$
Drag Moment per unit Depth	m_{Dh}^*	$\frac{C_D \rho g D}{2k^2}$
Inertia Moment per unit Depth	m_{Ih}^*	$\frac{C_M \rho g \pi D^2}{4k}$
Drag Moment, Depth Integrated	M_{Dh}^*	$\frac{C_D \rho g D}{2k^3}$
Inertia Moment, Depth Integrated	M_{Ih}^*	$\frac{C_M \rho g \pi D^2}{4k^2}$

Appendix 4.

5. SAMPLE SCREEN INPUT & DISPLAY

```
A>B:FENTON
STEADY WATER WAVE COMPUTATION USING THE FOURIER APPROXIMATION METHOD OF
                    M. M. RIENECKER AND J. D. FENTON.
UNIT 5 IS THE DATA INPUT FILE, UNIT 6 IS THE SOLUTION OUTPUT FILE,
UNIT 7 IS THE LOCAL VARIABLE OUTPUT FILE.
File name missing or blank - Please enter name

UNIT 5? 4C.DAT
UNIT 6? 4C.S10
UNIT 7? 4C.A10

HEIGHT STEP  1 OF  2

ITER.       Z(10)

 1   9.78391883E-02*
 2   7.93110178E-02                                          *
 3   7.72400196E-02                                              *
 4   7.71107145E-02                                              *
 5   7.71105895E-02                                              *

HEIGHT STEP  2 OF  2

ITER.       Z(10)


 1    .16782669    *
 2    .15638370                                              *
 3    .15696168                                          *
 4    .15694276                                           *
 5    .15694280                                           *
COMPUTING LOCAL SOLUTION
STEP  1, THETA =     .00 DEGREES
STEP  2, THETA =    3.75 DEGREES
STEP  3, THETA =    7.50 DEGREES
STEP  5, THETA =   15.00 DEGREES
STEP  9, THETA =   30.00 DEGREES
STEP 13, THETA =   45.00 DEGREES
STEP 17, THETA =   60.00 DEGREES
STEP 25, THETA =   90.00 DEGREES
STEP 33, THETA =  120.00 DEGREES
STEP 41, THETA =  150.00 DEGREES
STEP 49, THETA =  180.00 DEGREES
BE SURE TO USE CONDENSED MODE WHILE PRINTING.
Stop - Program terminated.

A>
```

SAMPLE INPUT AND SCREEN DISPLAY
APPENDIX 5

6. COMP. W/
DEAN'S SOL'N

COMPARISON OF RESULTS WITH DEAN'S SOLUTION

DEAN'S CASE 4C
(SHALLOW WATER)

DIMENSIONLESS OUTPUT VARIABLES

NUMBER OF FOURIER COEFFICIENTS

	8	9	10	12	15	17	18	23	DEAN'S SOLUTION 12
kd	0.31319	0.31338	0.31344	0.31347	0.31349	0.31350	0.31350	0.31350	0.31324
kH	0.18287	0.18299	0.18302	0.18304	0.18305	0.18305	0.18305	0.18305	0.18290
T*SQRT(gk)	9.91930	9.92240	9.92330	9.92370	9.92410	9.92420	9.92420	9.92420	9.92049
c*SQRT(k/g)	0.63343	0.63323	0.63317	0.63315	0.63312	0.63312	0.63312	0.63312	0.63338

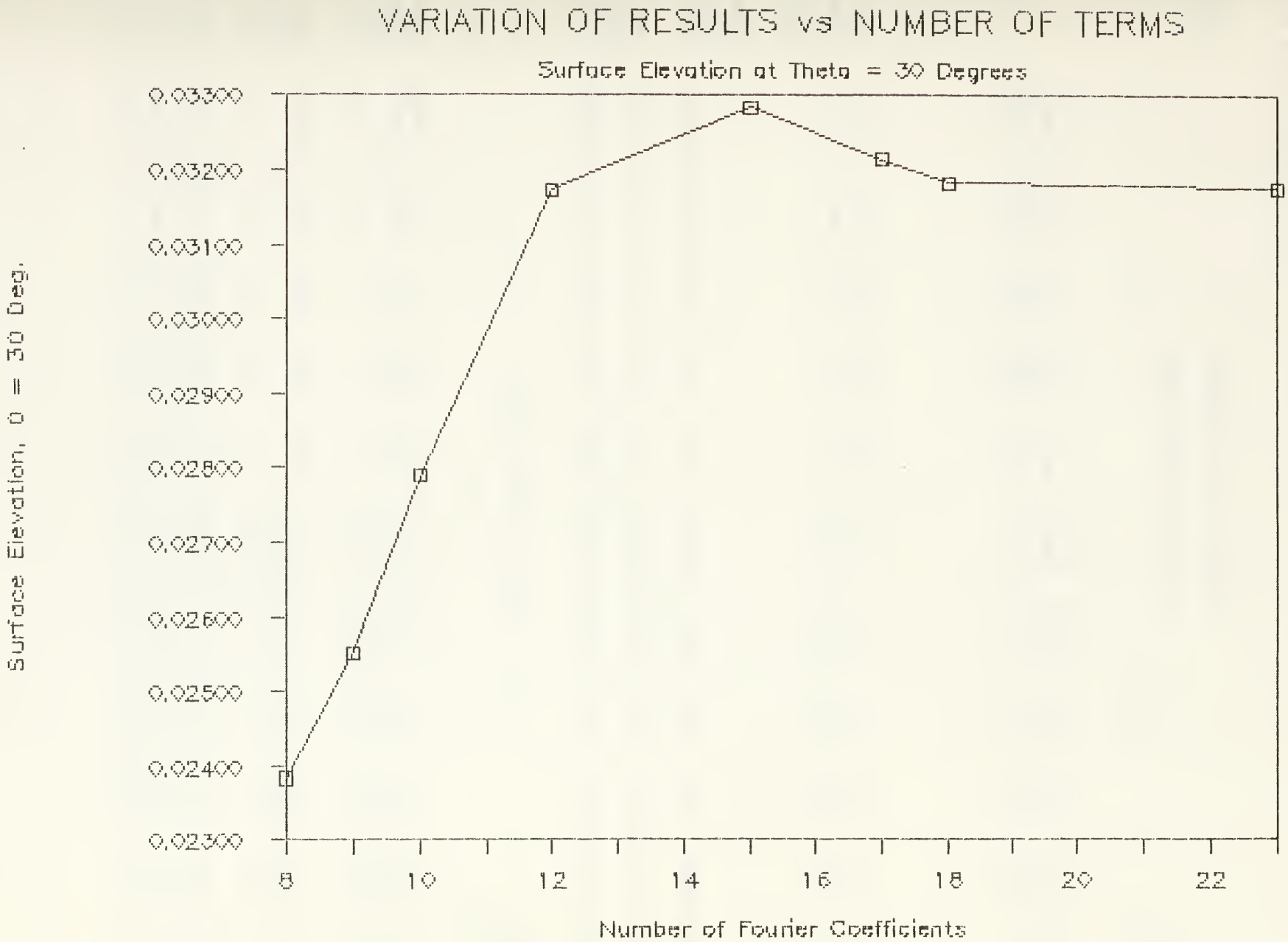
PHASE = 0 DEG.

VARIABLE	LOCATION									
ELEV.	SURFACE	0.15675	0.15689	0.15694	0.15700	0.15703	0.15703	0.15703	0.15703	0.15693
U	SURFACE	0.33052	0.33088	0.33093	0.33097	0.33101	0.33100	0.33100	0.33099	0.33295
U	BOTTOM	0.17434	0.17420	0.17416	0.17412	0.17410	0.17411	0.17411	0.17412	0.17383
V	SURFACE									
Ax	SURFACE									
Ax	BOTTOM									
Ay	SURFACE	-0.26811	-0.27069	-0.27171	-0.27229	-0.27275	-0.27314	-0.27315	-0.27335	-0.27822
FDS	BOTTOM	0.0237472	0.0237344	0.0237236	0.0237184	0.0237152	0.0237136	0.0237131	0.0237120	0.0237370
FIS	BOTTOM									
MDS	BOTTOM	0.0068426	0.0068466	0.0068453	0.0068455	0.0068455	0.0684500	0.0068447	0.0068440	0.0068555
MIS	BOTTOM									

PHASE = 30 DEG.

NUMBER OF FOURIER COEFFICIENTS

VARIABLE	LOCATION	8	9	10	12	15	17	18	23	DEAN'S SOLUTION 12
ELEV.	SURFACE	0.02383	0.02552	0.02789	0.03173	0.03285	0.03214	0.03183	0.03177	0.03164
U	SURFACE	0.05627	0.05751	0.05785	0.05754	0.05751	0.05763	0.05767	0.05769	0.05767
U	BOTTOM	0.07416	0.07471	0.07489	0.07495	0.07500	0.07502	0.07503	0.07506	0.07471
V	SURFACE	0.10069	0.10039	0.10116	0.10260	0.10302	0.10279	0.10268	0.10266	0.10181
Ax	SURFACE	0.20231	0.19828	0.19830	0.19951	0.20000	0.20002	0.19992	0.19980	0.19558
Ax	BOTTOM	0.14597	0.14518	0.14508	0.14502	0.14498	0.14498	0.14498	0.14499	0.14476
Ay	SURFACE	0.12340	0.11904	0.11802	0.11989	0.12031	0.11994	0.11979	0.11973	0.11666
FDS	BOTTOM	0.0016163	0.0016605	0.0016833	0.0017010	0.0017080	0.0017068	0.0017061	0.0017060	0.0016919
FIS	BOTTOM	0.0556552	0.0554327	0.0558404	0.0566100	0.0568360	0.0567107	0.0566503	0.0566350	0.0562365
MDS	BOTTOM	0.0002512	0.0002506	0.0002663	0.0002717	0.0002736	0.0002730	0.0002727	0.0002730	0.0002704
MIS	BOTTOM	0.0099202	0.0099145	0.0100617	0.0103279	0.0104081	0.0103635	0.0103425	0.0103370	0.0102295


VARIATION OF RESULTS vs NUMBER OF TERMS
Surface Elevation at Theta = 30 Degrees
Surface Elevation, θ = 30 Deg.
0.03300
0.03200
0.03100
0.03000
0.02900
0.02800
0.02700
0.02600
0.02500
0.02400
0.02300
8
10
12
14
16
18
20
22
Number of Fourier Coefficients

COMPARISON OF RESULTS WITH DEAN'S SOLUTION

DEAN'S CASE 8C
(DEEP WATER)

DIMENSIONLESS OUTPUT VARIABLES

		NUMBER OF FOURIER COEFFICIENTS										DEAN'S
		DEEP					FINITE					SOLUTION
		1	6	7	9	10	1	6	7	9	10	7
kd							2.78970	2.79180	2.79190	2.79190	2.79190	2.79203
kH		0.69873	0.70041	0.70042	0.70042	0.70042	0.70294	0.70347	0.70348	0.70349	0.70349	0.70353
T*SQRT(gk)		5.90310	0.59102	5.91020	5.91020	5.91020	5.92909	5.92310	5.92310	5.92320	5.92320	5.92333
c*SQRT(k/g)		1.06440	1.06310	1.06310	1.06310	1.06310	1.0612	1.06080	1.06080	1.06080	1.06080	1.06075

PHASE = 0 DEG.

VARIABLE	LOCATION											
ELEV.	SURFACE	0.34937	0.42532	0.42534	0.42534	0.42534	0.35147	0.43010	0.43012	0.43013	0.43013	0.42986
U	SURFACE	0.49674	0.53442	0.53443	0.53443	0.53443	0.50175	0.54525	0.54527	0.54527	0.54527	0.54529
U	BOTTOM						0.04330	0.03895	0.03895	0.03895	0.03895	0.03896
V	SURFACE											
Ax	SURFACE											
Ax	BOTTOM											
Ay	SURFACE	-0.28197	-0.31744	-0.31758	-0.31764	-0.31764	-0.27965	-0.32029	-0.32048	-0.32057	-0.32058	-0.32046
FDS	BOTTOM	0.1241271	0.1340783	0.1341075	0.1341075	0.1341074	0.1290684	0.1400559	0.1400526	0.1400504	0.1400501	0.1390360
FIS	BOTTOM											
MDS	BOTTOM	0.3725286	0.4155981	0.4155935	0.4155895	0.4155891	0.3386867	0.3830363	0.3830371	0.3830335	0.3830330	0.3792870
MIS	BOTTOM											

PHASE = 30 DEG.

		NUMBER OF FOURIER COEFFICIENTS										DEAN'S
		DEEP					FINITE					SOLUTION
VARIABLE	LOCATION	1	6	7	9	10	1	6	7	9	10	7
ELEV.	SURFACE	0.30256	0.30510	0.30465	0.30488	0.30302	0.30438	0.30501	0.30447	0.30474	0.30491	0.30533
U	SURFACE	0.41051	0.38595	0.38575	0.38585	0.38591	0.41462	0.38827	0.38803	0.38815	0.38822	0.38827
U	BOTTOM						0.03750	0.03368	0.03368	0.03368	0.03368	0.03373
V	SURFACE	0.23701	0.24781	0.24763	0.24767	0.24771	0.23840	0.25233	0.25208	0.25213	0.25218	0.02996
Ax	SURFACE	0.25227	0.29440	0.29400	0.29398	0.29403	0.25322	0.30351	0.30298	0.30293	0.30300	0.30302
Ax	BOTTOM						0.02216	0.02019	0.02018	0.02018	0.02018	0.02017
Ay	SURFACE	-0.21225	-0.19616	-0.19618	-0.19621	-0.19621	-0.20992	-0.19190	-0.19193	-0.19197	-0.19197	-0.19193
FDS	BOTTOM	0.0847524	0.0734219	0.0733535	0.0733893	0.0734103	0.0882519	0.0754632	0.0753785	0.0754211	0.0754480	0.0750716
FIS	BOTTOM	0.2446345	0.2529791	0.2527890	0.2528363	0.2528765	0.2508265	0.2617446	0.2614995	0.2615515	0.2616604	0.2611139
MDS	BOTTOM	0.2503982	0.2176584	0.2174224	0.2175458	0.2176181	0.2273028	0.1953399	0.1950811	0.1952141	0.1952975	0.1938773
MIS	BOTTOM	0.6265535	0.6614313	0.6607917	0.6609602	0.6610990	0.5492321	0.5893204	0.5885961	0.5887686	0.5889312	0.5871094

215582

Thesis
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Westberg
Application of a fourier approximation method for the solution of steady problems to the microcomputer.

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Application of a fourier approximation method for the solution of steady problems to the microcomputer.

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